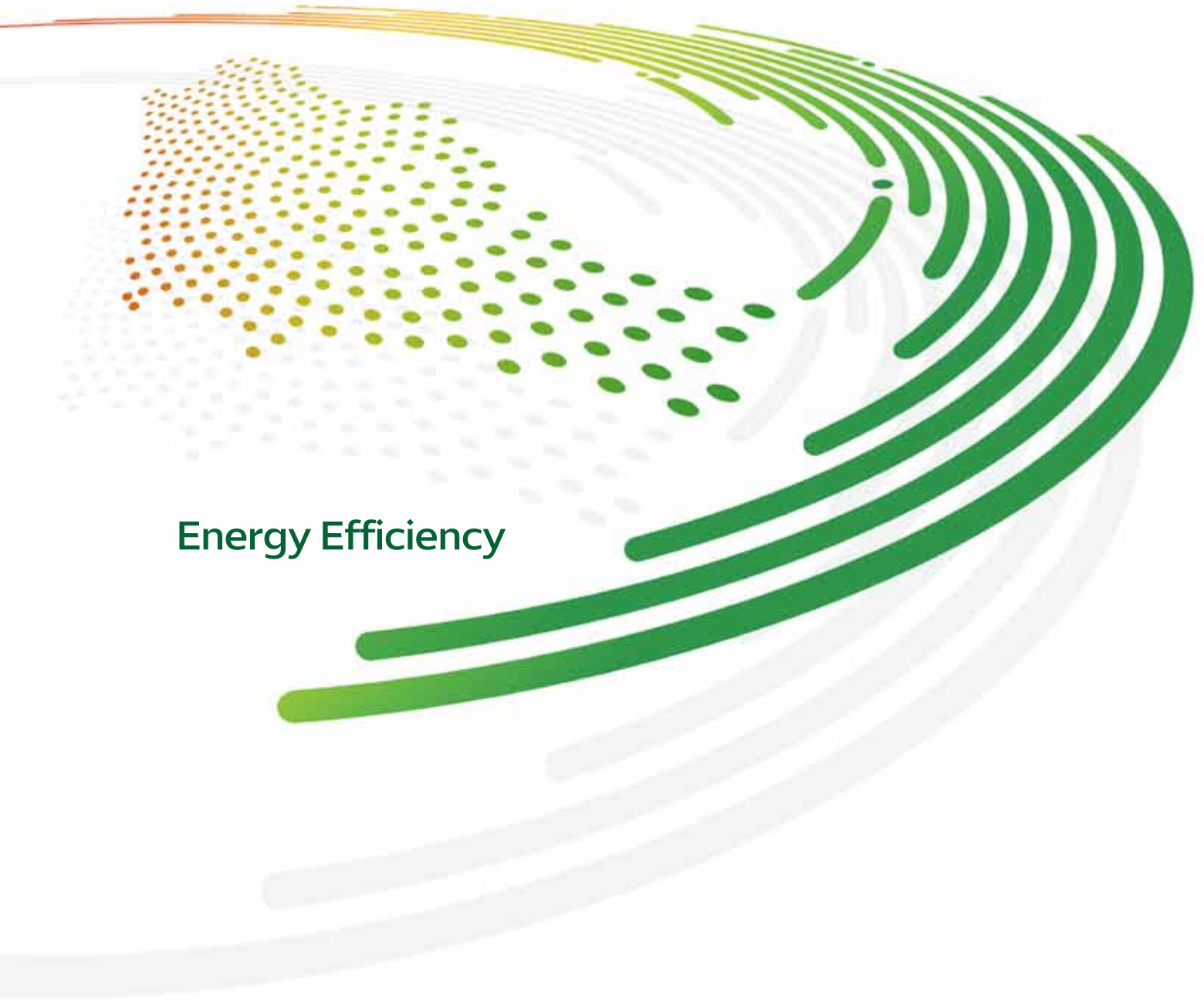


كفاءة

المركز السعودي لكفاءة الطاقة  
Saudi Energy Efficiency Center



## Energy Efficiency



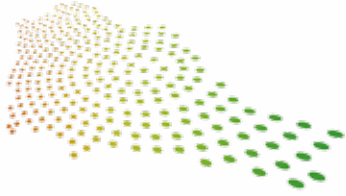
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## Executive Summary

The reporting year marked the approval of the Council of Ministers, No. (353) dated 3 Rajab 1439 AH, of the Saudi Energy Efficiency Center's new organizational structure, where the following two fields of specialty were added to the new structure:

- Increasing energy efficiency in power generation and water desalination..
- Increasing raw material (feedstock) efficiency in the industrial sector.

During 2018, the Center has continued its efforts in increasing energy efficiency and rationalizing consumption in the three main consumption sectors (industrial, buildings, and land transport), most notably:

- In the industrial sector, visits were conducted to 60 target factories (including steel and chemical products, ceramics, paper, glass, and metals extraction). These visits aimed at verifying received data and reviewing reports specific to each plant, in an attempt to develop a mechanism for increasing energy efficiency, as well as monitoring the implementation of energy efficiency requirements in current and new plants, and developing the energy

efficiency specifications of rotating electrical machines.

- In the utilities sector, and in accordance with the new structure, a specific workforce was established, encompassing concerned government parties, in order to develop a mechanism that aims at increasing energy efficiency in this sector.
- In the transport sector, the used vehicles database has been updated to include the 2019 models. The database specific to Saudi Arabia corporate average fuel economy (Saudi CAFE) has also been updated to cover electric cars. The fuel economy cards have as well been updated to include those specific to electric cars. This is in addition to the initiation of the second phase of fuel economy cards, which includes an extra level «Excellent +» for the top 10% of available models in the Kingdom.
- In the Buildings sector, the detailed design phase of the energy intensity program for buildings has commenced along with initiating and operating the governmental buildings depreciation database. Moreover, the specifications development of small



capacity air conditioners, refrigerators, freezers, washing machines, dryers and heaters, have been approved. The lighting standard in its second phase has as well been established.

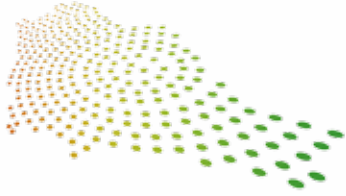
- The monitoring and evaluation results illustrate the significance of the implemented measures, where visits to industries, warehouses and outlets were conducted and resulted in the issuance of 1,524 immediate violation fines to non-abiding facilities, temporary suspension of **35** violating factories with non-compliant products, in addition to the re-exportation of **547,691** non-compliant products and the recycling of **97,531** non-compliant products and 52 tons of incompatible insulation products.
- The reporting year has as well witnessed the launching of the preliminary phase of «High Efficiency Air Conditioners Initiative» on October **26, 2018** prior to launching it completely in **2019** across the whole Kingdom.
- As for the energy service companies, they were granted **27** licenses, in parallel with the launching of the second version of the web portal of energy service providers along with

the listing of business activities of energy efficiency as one of the components of «Invest Saudi» initiative, in collaboration with the Saudi General Investment Authority.

- The Center continued its efforts to qualify national workforce in the field of energy efficiency, where it implemented 13 training programs for professional certification in several cities in the Kingdom, targeting more than **340** trainees. The benefits of such efforts were reaped in the qualification and accreditation of 69 specialists by the American Association of Energy Engineers (AEE).
- In parallel with these efforts and initiatives, the Center continued to raise awareness on the importance of energy conservation. The year **2018** was marked with a wide awareness six-week campaign under the hashtag #ToRemain\_Campaign (#litabka). This campaign aimed to render the optimal consumption of energy at all times a duty for everyone, thus sustaining its growth and ensuring its survival, without having any effect on the well-being of the society.

Allah is the arbiter of success,,





## Introducing the Center

The Saudi Energy Efficiency Center is a national and governmental center that undertakes the responsibility of rationalizing and increasing the efficiency of energy, and consolidating both governmental and non-governmental efforts in this field.

## The Center's Establishment

The Saudi Energy Efficiency Center was established under the decision no. (363) on 241431/11/ AH.

The Saudi Cabinet approved the new organizational structure of the Saudi Energy Efficiency Center on 3 Rajab 1439 AH, i.e. March 20, 2018.





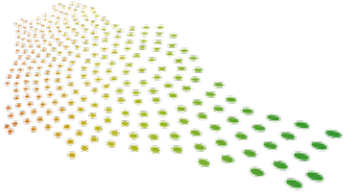
## The Center's Objective

The Center aims to rationalize the production and consumption of energy in order to increase its efficiency in the Kingdom, and consolidate governmental and non-governmental efforts in this field.

## The Center's Mission

The Center's mission is to preserve the national wealth of energy sources, and hence promoting development and enhancing the national economy through the rationalization and increase of energy efficiency, in order to decrease population and gross national product consumption to the lowest extent possible.





## The Center's Areas of Specialty

- Developing national energy efficiency programs and identifying indicators, targets, plans and related policies.

- Proposing energy efficiency systems projects in coordination with concerned stakeholders.

- Issuing technical regulations, standards and procedures that achieve energy efficiency, including those related to district cooling.

- Contributing along with concerned stakeholders in the development of standard specifications for machinery, equipment, lighting systems, means of transportation, and others in a way that promotes energy efficiency.

- Developing the required standards for the management of the energy efficiency cards program, in coordination with relevant stakeholders.

- Setting the required rules and procedures to qualify and license energy efficient service providers, in preparation to complete the necessary regulatory requirements.

- Coordinating with relevant stakeholders to establish the required rules for energy efficiency tests.

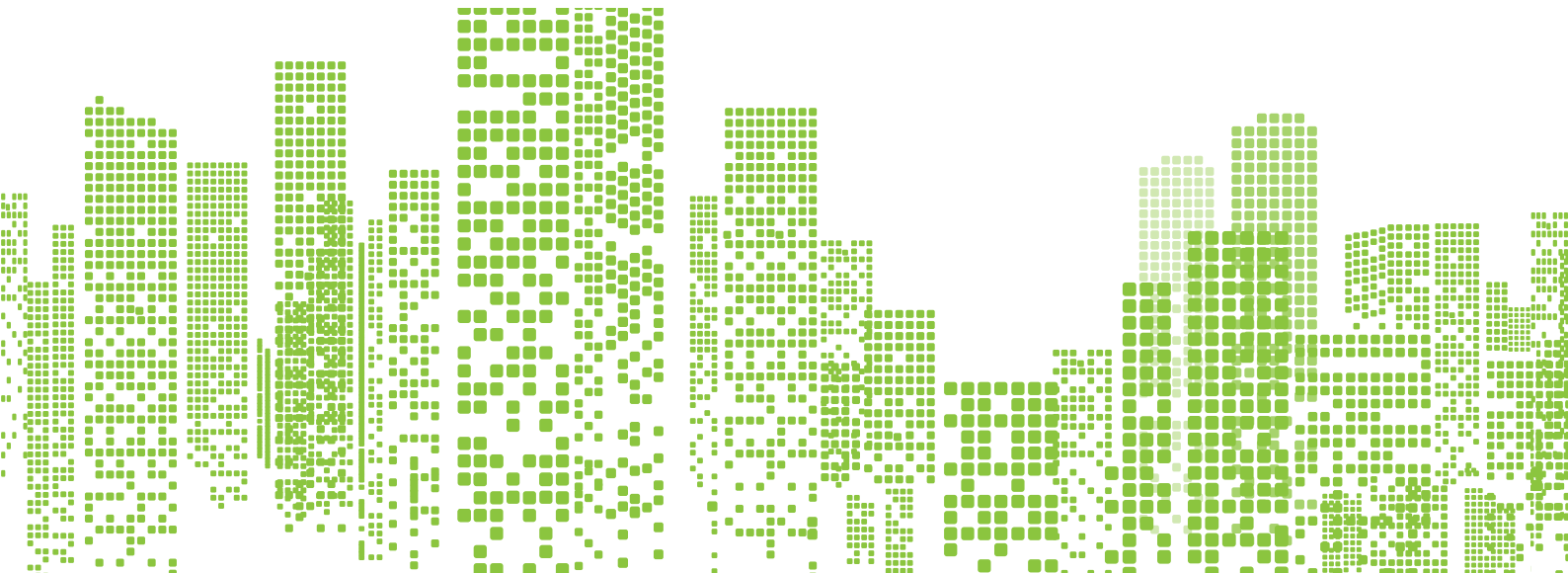
- Providing technical and advisory services in the field of energy audit, measurement and verification.

- Developing, publishing, and constantly updating the national manual for verification and measurement of energy efficiency services.

- Monitoring compliance with energy efficiency standards, and undertaking all measures to implement them.

- Drafting periodic reports about energy efficiency in collaboration with concerned stakeholders.

- Collection of documentation and information about energy efficiency from energy users.



● Updating the required databases to achieve the Center's objectives in cooperation with the concerned stakeholders.

● Preparing periodic reports about Energy production and consumption in the Kingdom, in coordination with relevant stakeholders.

● Promoting and supporting research and studies in all fields related to energy efficiency.

● Promoting investment in fields that aim at achieving energy efficiency.

● Supporting the development of training programs in the energy efficiency related fields.

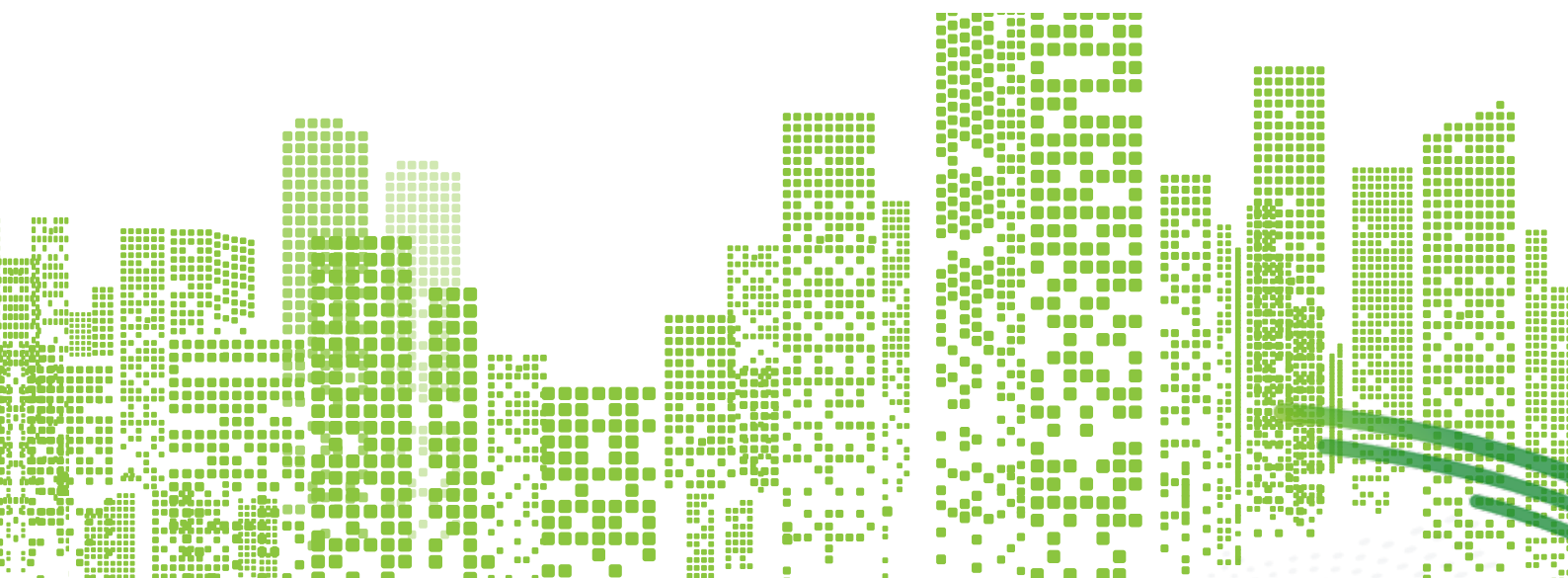
● Adoption of professional training programs and working with donors that provide certification in the areas of energy efficiency training.

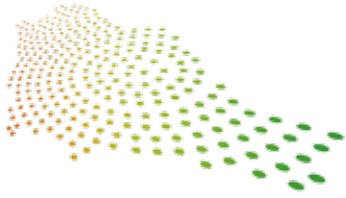
● Coordinating and following up the establishment of energy curricula and activities related to energy efficiency in public, higher or technical education, in cooperation with the concerned stakeholders and educational institutions.

● Organizing exhibitions, conferences, programs, seminars, as well as cooperating with professional parties to raise awareness on energy efficiency.

● Conducting communication and collaboration on the international scale and representing the Kingdom abroad in the energy efficiency related fields, to benefit from other countries' experience.

● Signing Memorandums of Understanding and agreements with international and regional entities, local governmental bodies, and non-governmental companies and institutions, in the areas of energy efficiency.





## Board Members



وزارة التجارة والاستثمار  
Ministry of Commerce and Investment



وزارة البيئة والمياه والزراعة  
Ministry of Environment, Water & Agriculture  
وزارة البيئة والمياه والزراعة  
Ministry of Environment, Water & Agriculture



المملكة العربية السعودية  
وزارة الصحة  
Ministry of Health



وزارة المالية  
Ministry of Finance



وزارة النقل  
TRANSPORT MINISTRY



وزارة الشؤون  
البلدية والقروية  
Ministry of Municipalities and Urban Planning



وزارة الاقتصاد والتخطيط  
MINISTRY OF ECONOMY & PLANNING



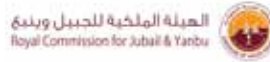
وزارة الإعلام  
Ministry of Media



وزارة الإسكان  
MINISTRY OF HOUSING



مركز تنظيم الكهرباء والإنتاج المزدوج  
ELECTRICITY & COGENERATION REGULATORY AUTHORITY



الهيئة الملكية للجبيل وينبع  
Royal Commission for Jubail & Yanbu



الهيئة السعودية للمواصفات والمقاييس والجودة  
Saudi Standards, Metrology and Quality Org



مدينة الملك عبدالعزيز  
للعلوم والتقنية  
KACST



الجمارك السعودية  
SAUDI CUSTOMS



الهيئة العامة للتخطيط والبحث الاقتصادي  
The Saudi Authority of Planning and Economic Research



أرامكو السعودية  
Saudi Aramco



الهيئة الوطنية لآلية التنمية النظيفة  
Clean Development Mechanism  
Designated National Authority



مدينة الملك عبد الله لطباعة  
الكتاب والمطبوعات  
K.A-CARE



الشركة السعودية للكهرباء  
Saudi Electricity Company



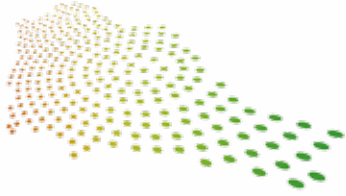
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# The Center's Board of Directors

The Center is governed by a board of directors consisting of both governmental entities and state-owned companies. This board is the controlling authority that manages and discharges the Center's activities and makes the required decisions to meet the Center's objectives in accordance with its bylaws.

## The Role of the Board of Directors

- 1 Setting the Center's general strategies and developing basic guidelines, in addition to identifying the primary objectives, adopting plans, programs and policies to achieve them, and supervising and following up upon their implementation.
- 2 Adopting the organizational structure in addition to technical, financial and administrative regulations enabling the Center to achieve its objectives.
- 3 Determining the financial fees charged by the Center in exchange of its offered services and activities.
- 4 Approving the Center's budget, financial statements, auditor's report, and annual report prior to issuing them in accordance with statutory procedures.
- 5 Accepting donations, grants, wills, endowments and aids provided to the Center.
- 6 Appointing individual or corporate external auditors authorized to work in the Kingdom, along with appointing internal auditors, and determining their fees.
- 7 Creating an executive committee consisting of Board members and determining its duties, in addition to establishing committees and teams consisting of both Board and non-Board members, and determining their duties.



## The Center's Executive Committee

In **2018**, the Executive Committee of the Saudi Energy Efficiency Center held **12** meetings, each attended by around **120** experts, to assess the efforts of the Saudi Energy Efficiency Program task forces and the work progress in each team, and to discuss the main obstacles and their corresponding solutions.



# 2018

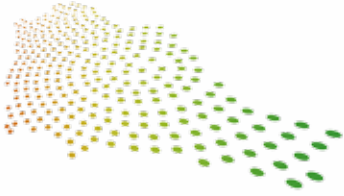


Each attended by **120** Experts



**12** meetings





## The Saudi Energy Efficiency Program

The «Saudi Energy Efficiency Program» is an integral work that is the fruit of perfect agreement and harmony between all concerned stakeholders, be it from the public or private sectors. This program seeks to develop and execute activities with the aim of increasing the efficiency of energy production and consumption. It also strives to establish initiatives, systems, and regulations, in addition to mechanisms of financing and implementation, based on an action methodology of full collaboration between various governmental authorities in charge of implementing the program while completely respecting the expertise of each separate authority, and benefiting from international experiences with respect to the outcomes of globally applied energy efficiency programs.

### Scope of Work



Industry



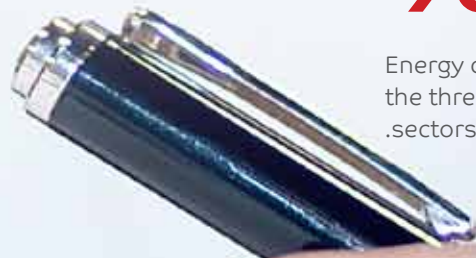
Transport



Buildings

90%

Energy consumption by  
the three main energy  
sectors in the Kingdom





## The Program Work Structure

The «Saudi Energy Efficiency Program» is based on an integral work structure built upon three foundations:

### ■ Principles:

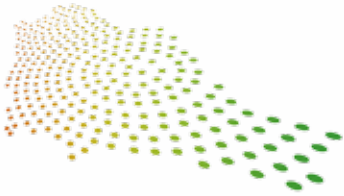
Include the program management process and the workflow procedures, as well as rules of engagement with all stakeholders concerned with the development and execution of activities and distributing their roles as per governance standards.

### ■ Development and Execution:

Include the process of development of the necessary specifications, standards and requirements to enhance various program activities, which will contribute to boosting the energy efficiency market, through creating investment opportunities that will lead to an increase in competition on quality.

### ■ Human Resources Development:

Includes awareness-raising events for the various program activities, as well as improving human resources qualifications on the energy efficiency market.



## Executive Committee

- Ministry of Energy, Industry and Mineral Resources
- Ministry of Municipal and Rural Affairs
- Ministry of Finance
- Ministry of Commerce and Investment
- Ministry of Housing
- Electricity and Cogeneration Regulatory Authority
- Saudi Customs
- Saudi Standards, Metrology and Quality Organization
- Saudi Energy Efficiency Center
- Saudi Electricity Company
- Saudi Aramco
- Sabic

**Review and Coordination Team**  
Reviews the activities at their different phases, and coordinates with technical teams

**Technical Teams**  
Include representatives of concerned stakeholders, each team being led by the party with the most relevant experience

- Buildings
- Industry
- Utilities
- Legal
- Inspection, Monitoring and Certification
- Energy Efficiency Service Providers
- Land Transport
- Urban Planning
- Awareness
- Human Resources
- Financing

## The Program's Organizational Structure

Organized and homogeneous team of

Consolidating efforts and investing in capabilities of more than

**150** experts

**25** concerned parties

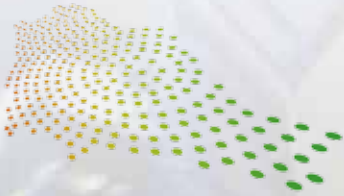




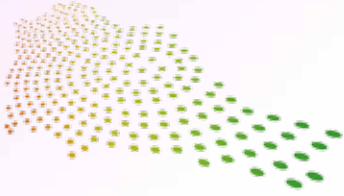


## **Efforts**

& Achievements in 2018



The Center collaborated with the concerned government entities to establish a work system that would support the achievement of the Saudi Energy Efficiency Program initiatives, through developing the required systems and regulations aiming to increase energy efficiency, and supporting their implementation, as well as raising social and public awareness in the areas of energy rationalization.



## Industrial Sector

### Objectives



Implementing the framework of current and new plants



Monitoring the implementation of the minimum energy efficiency standards related to electric engines



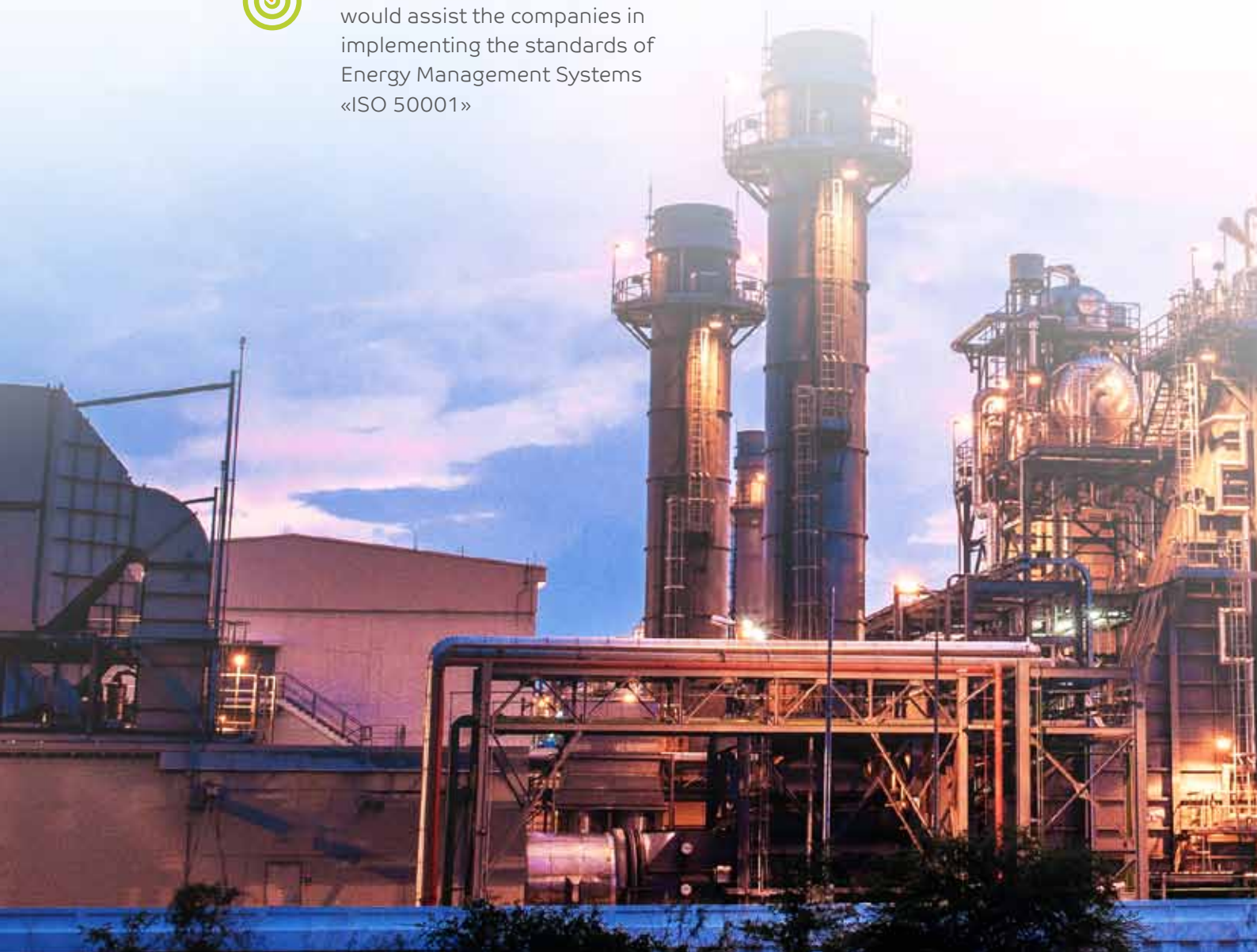
Expanding the scope of work for both current and new plants to include the aluminum sector, and initiating studies related to other industrial sectors, (This one is covered in the Initiatives and Achievements in details )



Designing and implementing initiatives that would improve efficiency of feedstock utilization in industry .



Developing infrastructure that would assist the companies in implementing the standards of Energy Management Systems «ISO 50001»





## Initiatives and Achievements in 2018

1

SEEC has selected 6 other industrial sectors (Steel Products, Chemicals, Pulp & Paper, Clay & Ceramics, Glass and Mining) to understand more about their energy consumption, technology use and energy saving opportunities and adopted best practices.

2

In pursuance of this goal, SEEC conduct Walkthrough Energy Audits (WTEAs) at 60 industrial plants in these 6 sectors, carrying out 6 Detailed Energy Audits for industrial plants one of each these sectors, sectoral reports and organizing sectoral dissemination workshops are completed. Accordingly, SEEC completed all the 60 WTEA reports at the selected industries in the targeted 6 sectors indicated above, through site visits, data collection, validation and report preparation of various facilities across the Kingdom of Saudi Arabia.

3

Monitoring the implementation of energy efficiency requirements in the existing and new plants. The scope of work included 24 petrochemical companies, 15 cement companies, 3 steel companies with more than 180 plants/production lines. Energy related data were collected, analyzed, and verified for accuracy. Meetings were then held with all companies to discuss the data and share annual reports.

4

Saudi Energy Efficiency Center (SEEC) Saudi Standards Metrology and Quality Organization (SASO) and Saudi Accreditation Committee (SAC) have been working on developing the infrastructure of ISO 50001 in the kingdom by preparing the registration system scheme and accreditation scheme for the Certification bodies (CBs).

5

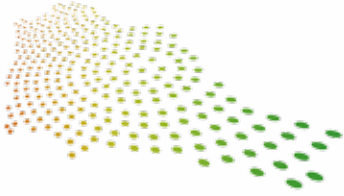
Monitoring the implementation of New Plants requirements and scheme.

6

Meetings were held with the top management of certain industrial companies to discuss the level of commitment to achieve energy efficiency in the first phase **(2014/ 2019)**.

7

Energy efficiency specifications of electric motors was updated in coordination with concerned stakeholders. A workshop on updating energy efficiency standard of electric motors was conducted in Riyadh on April 25, 2018, as per SASO technical standard SASO 2893 - 2018.

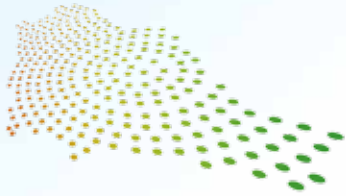


## Local and International Workshops

- 1** An introductory workshop was organized on the **31st** of July **2018** in Jubail, to discuss the feedstock utilization efficiency in plants
- 2** On the **25th** of April **2018**, a workshop was organized on updating energy efficiency standard of electric motors as per SASO technical standard SASO 2893 - 2018
- 3** The Center participated in a workshop on «Energy Efficiency Systems in Industrial and Mining Facilities» in the United Arab Emirates in Dec 2018. The workshop featured the presentation of energy efficiency systems applied in the industrial sector in Saudi Arabia, shedding the light on the main implemented initiatives and highlighting the Kingdom's experience in this field.
- 4** A workshop was held in March **2018** for the industrial sector on the objectives of the new industrial sectors initiatives (steel products, chemicals, ceramics, paper, glass, and metal mining).







## Utilities Sector

Pursuant to the Council of Ministers decision no. **353** enacting the new organizational structures, and adding the Kingdom energy supply sectors to the Center's organizational structure, several initiatives were launched, including those related to the utilities sector, which alone consumes about **38%** of the Kingdom's total primary energy consumption.



### Objective:

Cooperation with concerned authorities and consolidation of efforts in the field to develop a work process aimed at increasing energy efficiency in the Utilities sector in the Kingdom, including:

- **Power plants and electricity cogeneration.**
- **Water desalination stations.**
- **Electricity transmission and distribution.**

## Initiatives and Achievements in 2018

1

Creation of technical teams in the Saudi Energy Efficiency Program, consisting of:

- The Ministry of Energy, Industry and Mineral Resources
- The Ministry of Environment, Water and Agriculture
- The Electricity and Cogeneration Regulatory Authority
- The Saudi Energy Efficiency Center

2

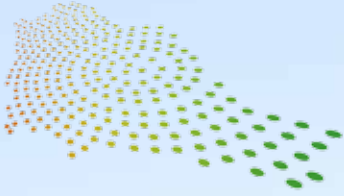
Development and adoption of a workflow plan

3

Involvement of the private sector represented by electricity generation and desalination companies in the Kingdom, as well as international and local companies that produce and provide related technologies; in addition to several workshops, meetings and visits conducted to present the approved business plan and related directives, and to discuss opinions and gather ideal technical suggestions.

4

Preliminary assessment of the current status of energy efficiency in electricity generation and water desalination stations as well as in the field of electricity transmission and distribution.



## Transportation Sector

### Objectives:



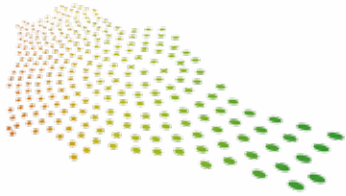
Improve energy efficiency in the transportation sector in alignment with the best practices implemented globally .



## Efforts & Achievements in 2018

- 1 Updated the current database of used vehicles to include 2019 models
- 2 Updated the specifications of the Fuel Economy standard (Saudi CAFE) to cover battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs)
- 3 Generated fuel economy reports on a quarterly basis to reflect levels of compliance of vehicles manufacturing companies with the Fuel Economy standard. These reports were shared with vehicles manufacturers.
- 4 Completed and shared the first draft of the second phase of the fuel economy standard (Saudi CAFE) with vehicles manufacturers.
- 5 Finalized the implementation plan for the second phase of the Tire Rolling Resistance & Wet Grip standard.
- 6 Updated the Fuel Economy Label standard to cover battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) .
- 7 Implemented the updated Fuel Economy Label, which includes an additional category “Excellent +” to accommodate for the dramatic increase in models registered as “Excellent”.





## Local and International Workshops

- 1 Showcased the Kingdom's efforts in energy efficiency of land-transportation in a seminar held by the Saudi-Japanese Automobile High Institute in Jeddah on December **19th, 2018**.
- 2 Participated in the "**G20** Transport Task Group and South American Summit meeting" to present the Kingdom's efforts in energy efficiency of land-transportation. The meeting was held in Argentina on September **24th, 2018**.
- 3 Conducted the annual workshop with all vehicles manufacturers to discuss the first phase of the Fuel Economy standard & label, which expands the scope of the Saudi CAFE to cover electrical vehicles.
- 4 Participated in the workshop, organized by King Abdullah Petroleum Studies and Research Center (KAPSARC), focusing on improving the fuel economy of land-transportation held on November **15th, 2018**.





# Key Findings

## Fuel Economy Standard, Annual Improvement from 2016 to 2018



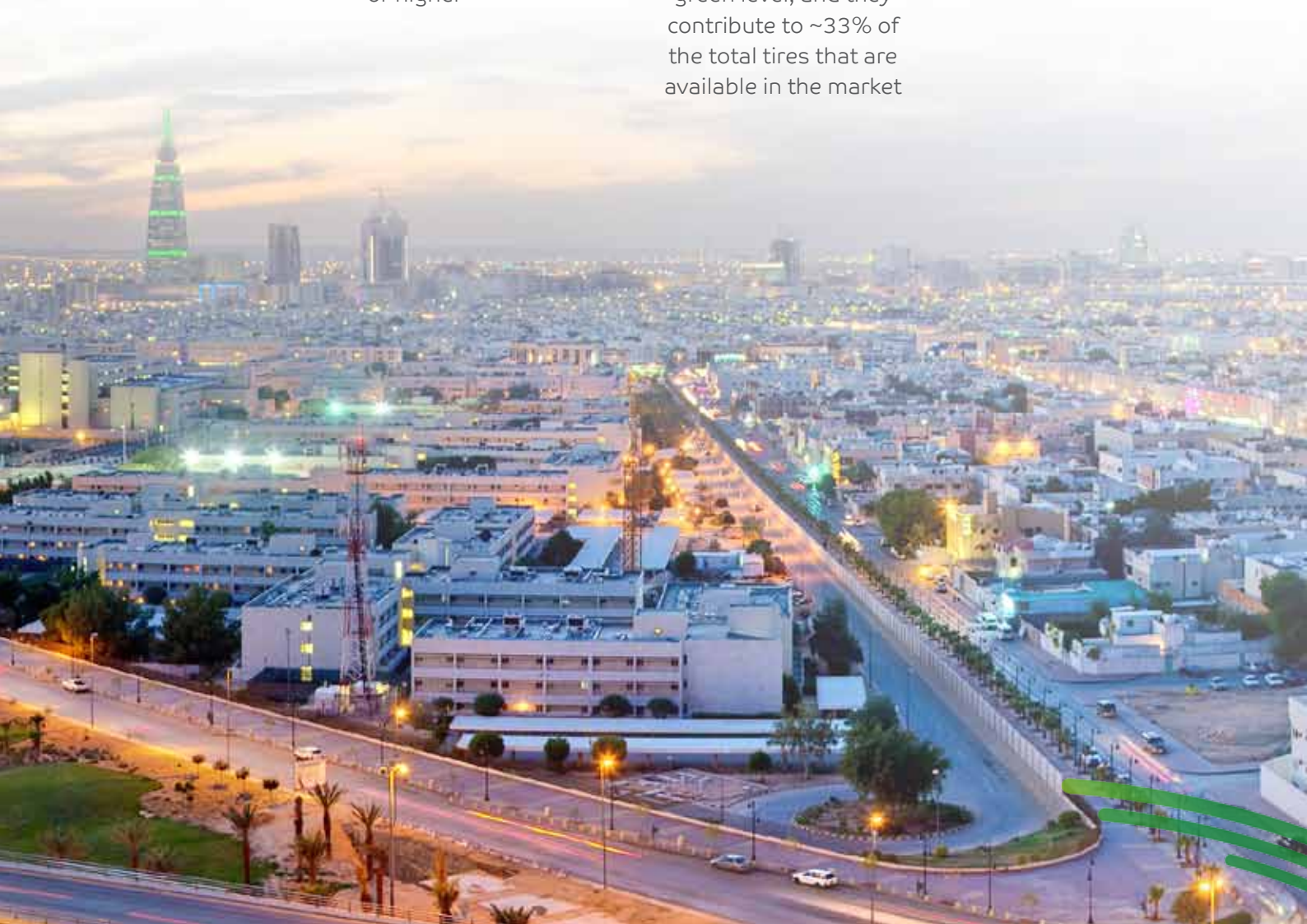
**1**  
**New vehicles : 3.5%**  
annual improvement in fuel economy

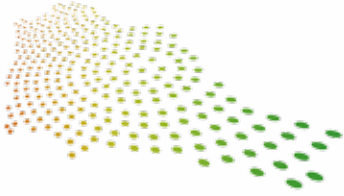
**2**  
**Used vehicles : 6.5%**  
annual improvement in fuel economy



**3**  
**14.4%** increase in high energy efficient vehicles registered as “Excellent” or higher

**4**  
**20%** increase in high energy efficient tires registered within the green level, and they contribute to ~33% of the total tires that are available in the market





## Buildings Sector

### Objectives



Rationalizing energy consumption and increasing energy efficiency in buildings sector



Keeping pace with international practices To meet the increase of energy efficiency



Updating the previous standards and developing new standards for electrical appliances.



Monitoring and drafting plans to implement energy efficiency standards in Saudi market and to ensure commitment of stakeholders.

## Local and International Workshops

1

Two workshops have been done in Riyadh with governmental entities aiming to explain the requirements for the web portal of the Governmental Buildings Electricity Rationalization portal of the energy rationalization Initiative .

3

Saudi Family Forum workshop was led by the Ministry of Labor and entitled “Smart Consumption... Solutions and Applications”.

2

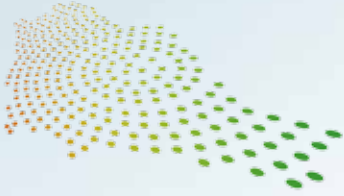
Two workshops have been done regarding the standards of street lighting (with governmental entities, manufacturers, and engineering companies).



## Initiatives and Achievements in 2018

- 1 Initiation of the detailed design phase of energy intensity program in buildings.
- 2 Creating and activating a database for energy consumption in governmental buildings.
- 3 Reviewing the energy rationalization codes No. **601** and **602** of the Saudi Building Codes, and following up after launching.
- 4 Adopting of the updated energy efficiency standards No. **2018/SASO 2663** for small air conditioners.
- 5 Adopting of the updated energy efficiency standards No. **2018/SASO 2892** for refrigerators and freezers.
- 6 Adoption of the updated energy efficiency standards No. **2018/SASO 2885** for washing machines.
- 7 Adopting of the updated energy efficiency standards No. **2017/SASO 2883** for clothes dryers.
- 8 Establishment of updated energy efficiency standards No. **2017/SASO 2884** for water heaters.
- 9 Establishment of part II of the updated energy efficiency standards No. **2018/SASO 2902** for lighting.
- 10 Updating the electronic registration system for all updated and new energy efficiency standards to issue the energy efficiency label.
- 11 Examination of the Tayseer Committee recommendations regarding the World Bank requirements and their effect on the Thermal Insulation System





## Testing, Inspection and Certifications

The mandatory of applying the new label of all energy efficiency standards for home appliances would begin on **October 2018**

### Sample Purchase:

Finalizing the implementation of the sample purchasing plan:

- 80 Air Conditioners
- 50 Refrigerators
- 40 Washing Machines
- 15 Thermal Insulation Products
- 250 Lighting Devices
- 290 Resistance Tires

### Monitoring Tours

18,799 visits

to the factories, warehouses and points of sale on the market

1,524 offences

Points of sale (markets)

35 violating factories

269,550

violating products

(factories, warehouses and markets)

violating products

547,691

Re-exported

1 AUX

re-exported

## Recall Violating Products

**7,695** violating products have been recalled, and they include the (7) following products:

**6**

**Air Conditioners**

**1**

**Refrigerator**

## Workshops

**1**

Two workshops took place to announce the date of the standards entry into force (home appliances - lighting second phase) to the relevant authorities.

**2**

Three training workshops for the monitoring authorities took place in Riyadh, Jeddah, and Dammam.

## Recycling

Adoption and incorporation of recycling policies in the procedures of the Saudi Energy Efficiency Program. We recycled -

**97,531**

**violating products**

**52**

**tons of violating thermal insulation products**

## Electronic Connectivity:

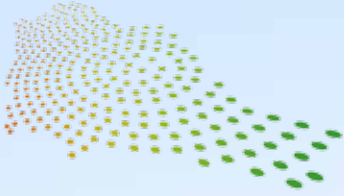
Completion of the first phase of electronic connectivity between the systems of the Saudi Customs and the Saudi Standards, Metrology and Quality Organization for energy efficient products.

## Infrastructure:

- Launch reference laboratories.
- Establishing and updating registration systems to issue energy efficiency labels for household appliances.

Banned and notified China government of all Chinese factories' violations.





# High Efficiency Air Conditioners Initiative



Air conditioners  
consume

**%50**

of electricity produced  
in the Kingdom

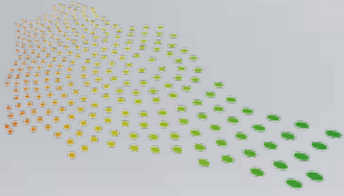
High efficiency air conditioners consumption is considered low compared to other types, especially the local manufacturers



Therefore, relevant governmental authorities combined efforts to put an end to this immense energy waste caused by air conditioners. This was achieved through the Saudi Energy Efficiency Center's implementation of international standards on all locally produced or imported air conditioners, with the aim to increase their efficiency and reduce their electricity consumption, in collaboration with the Private Sector Stimulus Plan.

The first phase of the High Efficiency Air Conditioners Initiative was launched in Q4 of 2018 with the aim of improving and supporting local production of high efficiency air conditioners in KSA, in addition to stimulating their sales in the Kingdom through providing an incentive to each of the citizens. This initiative will be ready for full launching in the second quarter of 2019 and will last 24 months.





## Qualifications and Capacity Development

### Objective



Increase knowledge in energy efficiency at the vocational, academic, and professional levels.

### Local and International Workshops

1

Event for Engineering students at King Saud University on **14/02/2018 AD** to raise their awareness and encourage them to join with the energy efficiency curriculum.

2

Participation in the **CERTX 2018** exhibition organized at the Crown Plaza Hotel to showcase the center's programs in terms of training, and marketing accredited certifications.

### Targeted Audience of the Professional Training Programs

48

Energy Conservation in Buildings and Factories

58

Certified Measurement and Verification Professionals (CMVP)

41

Certified Energy Auditors

85

Preparatory Training for Professional Certifications

108

Certified Energy Managers (CEM)



## Initiatives and Achievements in 2018

### 1 Energy Efficiency Curriculum in Universities:

(267) students enrolled in the energy efficiency curriculum from engineering colleges of the following 5 Saudi universities: King Abdulaziz University, King Saud University, King Fahd University, Qassim University, and University of Tabuk.

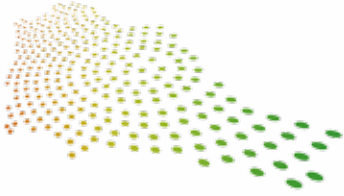
### 2 Energy Efficiency Curriculum in Technical Colleges:

An energy efficiency curriculum was developed for the students in the colleges of the Technical & Vocational Training Corporation.

### 3 Training Programs for Professional Certifications:

The center implemented 13 training programs in several cities of the Kingdom targeting more than (340) trainees as follows:

- 1/ (3) preparation courses for professional certifications.
- 2/ (4) Certified Energy Manager (CEM) courses.
- 3/ Two Certified Energy Auditor (CEA) courses.
- 4/ Two Certified Measurement and Verification Professional (CMVP) courses.
- 5/ Two courses in Energy Conservation in Buildings and Factories.
- 6/ Two CMVP local trainers accredited by the American Association of Energy Engineers (AEE).
- 7/ (69) specialists qualified and accredited by the AEE.



## Urban Planning and District Cooling

### Objective



The Saudi Energy Efficiency Program aims to reduce energy consumption and increase efficiency in new development projects. This is achieved by the implementation of guiding principles in urban planning through 3 main areas of focus that could increase efficiency of energy consumption in development projects such as:



Urban Form



Means of Public Land Transport



District Cooling

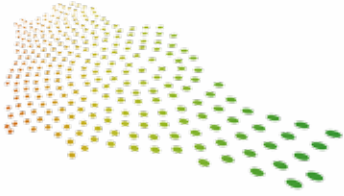


## Initiatives and Achievements in 2018

worked with the Ministry of Finance and the National Program to support the Management of Projects in Public Entities (Mashroat), with the aim to develop and implement a mechanism that ensures the implementation of the

Council of Ministers Resolution that stipulates the obligation of governmental entities to adopt a district cooling system in their future governmental projects in case they fall under the specific criteria.





## Energy Efficiency Service Providers

### Objectives



Training and certification of energy efficiency service providers in the Kingdom.



Provision of technical and consulting services in measurement and verification for the public and private sectors.



Training and certification of providers of energy efficient commercial services to promote investment in this field, along with providing measurement and verification services for energy efficiency projects in the private and public sectors.



## Initiative and Achievements in 2018

- 1 Launching of the second version of the online portal for companies that provide energy efficiency services.
- 2 (27) energy efficient companies licensed.
- 3 Management of commercial activities for energy efficiency through the “Invest Saudi” initiative in collaboration with the Saudi General Investment Authority
- 4 Implementation of Supreme Resolution No. (40424) related to the electronic connectivity and integration with Meras eGate to provide certifications to investors through this platform.
- 5 Adoption, publication and implementation of “Version Two” of the certification requirements of Saudi energy efficient companies.
- 6 Adoption and implementation of a procedure manual for measurement and verification in the rehabilitation of public buildings and street lighting.

### Local and International workshops

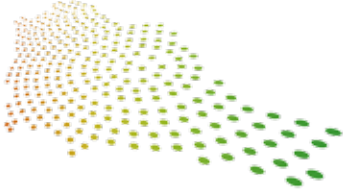
Participation in a workshop on the “mechanism of rationalization of electricity consumption” held in Riyadh on **011440/02/ H (102018/10/)** highlighting the center’s role in training energy efficiency service providers on the Saudi Market.





## **Programs**

& Awareness Campaigns



The Saudi Energy Efficiency Center continued to work on the implementation of campaigns, programs, and awareness sessions of different types with the aim to target all social categories and individuals and spread awareness around energy rationalization and efficiency increase across the Kingdom. These various campaigns and programs included:

■ Campaigns focusing on specific topics and messages delivered intensively for almost a month or more with the aim to spread several awareness messages through various media and communication channels to target a wide category of individuals in the community.

■ Awareness programs such as live sessions and exhibitions targeting a specific audience such as school, university, and technical college students (males and females), in addition to awareness stands in festivals, national events, exhibitions and conferences at the local, regional, and international levels.

## «To Remain» Campaign

This was the main campaign in the reporting year. It included 3 phases focusing on the consolidation of the Center's messages and objectives and clarifying the energy saving concepts that each citizen has to comply with by following the guidelines of the campaign.

### Objectives of the Campaign



Reminding the community that the Center is the reference in everything related to energy rationalization and efficiency increase.



This campaign was an entry point to a new phase embracing more campaigns and guidelines in the years to come.



Clarifying the benefits of complying with the awareness guidelines for energy saving and conservation.

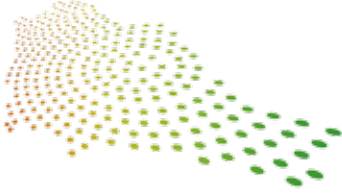
## #ToRemain\_Campaign

25 February - 31 March 2018









## لو بدلتوا مكيفات الإسبلت بأخرى مرشدة للطاقة ، كم توفرن ؟



### التوفير الشهري

لو بدلتوا بجيد الكفاءة

180 SR

توفير 35%

لو بدلتوا بعالي الكفاءة

250 SR

توفير 48%

تمت المقارنة بناء على الظروف الآتية

حساب مجموع التكلفة على خمس مكيفات

8 ساعات تشغيل يومياً

35 درجة حرارة خارجية

18,000 ساعة وحدة

#لتبقى طاقتنا لنا ولابنائنا

taqa.gov.sa

لتبقى كفاءة

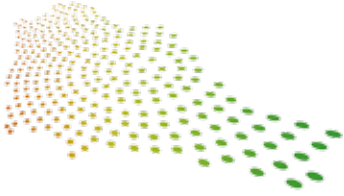


## #Campaign..Energy has a story



لتبقى #..المطاقة حكاية





## Cars and Tires Campaign

A medium-sized awareness campaign featuring awareness messages about energy-saving products before purchase, along with other messages about best practices to save energy after purchase.

### Campaign Messages

#### Cars



#### Tires

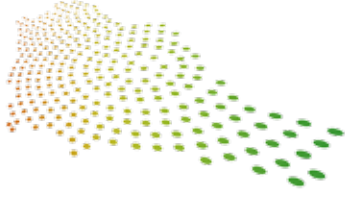


# الأخضر يوفر البنزين إلى 55%



#لتبقى  
taqa.gov.sa

لتبقى  
كفاءة 7



# الكفر الأخضر يوفر.. وأكثر #لتبقى



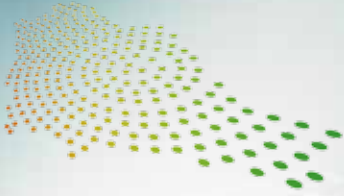
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You Tube

## # Thirty is Enough





## Our Awareness Campaigns in Numbers

2018

271

Tv Appearances

1,700

Radio Shows

3,064

Billboards

136

Tv and Radio Interviews

57M

Websites & Applications

506M

Billboards

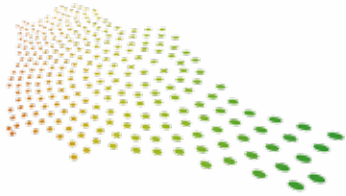


## Production in Numbers

 **15** Videos

 **76** Designs





## Awareness Exhibitions

### Women's Awareness Program in Entertainment Venues

(4) events took place in Riyadh and the Eastern Province in collaboration with Abdulmohsen Alhokair Holding. These events featured interactive delivery of awareness messages through exhibitions and theatre plays, in addition to competitions and interactive shows about energy rationalization performed by the art team. The audience (women and children) was very responsive and interactive with the event and encouraging gifts were distributed to all participants.

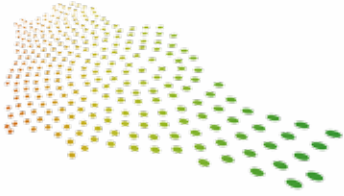
Event	City	Date
Exhibition + Theatre	Dammam	12-14 January 2018
Exhibition	Dhahran	16-18 January 2018
Exhibition + Theatre	Dammam	6 July 2018
Exhibition + Theatre	Riyadh	7 July 2018



## National Culture & Heritage Festival

The Saudi Energy Efficiency Center established an awareness stand in the 32nd Janadriyah National Culture & Heritage Festival that took place between 8 and 28 February, 2018. The stand featured the delivery of messages from previous awareness campaigns (## كيفك # تأكد # الفرق\_واضح # شوري\_عليك # تأكد) through interactive awareness programs targeting families and individuals with interactive awareness messages to spread interaction between the organizers and their audience. This initiative contributed to turning some negative behaviors into positive ones.





## Stand of the Ministry of Energy in the National Culture & Heritage Festival

The Center took part along with the Ministry of Energy in the National Culture & Heritage Festival through a stand which aim was to introduce participants to the energy efficiency concept and distribute awareness brochures and publications.



## Awareness Sessions in Technical Colleges

In collaboration with the Technical & Vocational Training Corporation, the Center organized awareness and knowledge spreading sessions for male and female students in Al-Ahsa, Hail, and Al-Jouf, as a means of continuation to the sessions that took place in other cities in 2017.

## Awareness Session at King Saud University

On the 8th of February 2018, an awareness session took place at King Saud University revolving around energy efficiency and targeting the university students and staff.

## Ministry of Education Event for the Engineering Sectors (Performance Efficiency)

The Center took part in the Ministry of Education Event for engineering sectors on the 21st and 22nd of February 2018.

## Interactive Programs in Public Schools

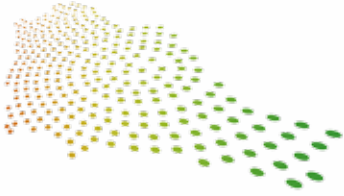
(5) interactive awareness programs were implemented in public schools for male and female students, in addition to an exhibition organized in Dhahran College for a week and targeting the Eastern Province students.





## **Developing**

the Internal Work  
Environment



## Enterprise Excellence

### Managerial Objectives



Enhancing the Center's work environment through the Quality Management System (**ISO 9001**), ensuring the existence of specific procedures, operations, and models for each department, and their implementation and continuous improvement.



Adopting a unified PMI standard for all projects to increase project management efficiency.



Drafting annual work plans for all the Center's departments, ensuring their constant follow up, and setting performance measurement criteria.



Implementing the energy management system (**ISO 50001**) with the aim to rationalize energy consumption and increase energy efficiency throughout the Center's building.





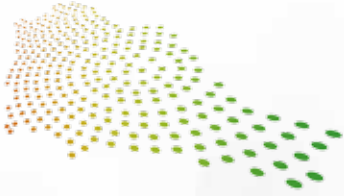
## Initiatives and Achievements in 2018

- 1 Update of procedures and models in all the Center's departments in addition to the risk register, along with setting the Center's improvement objectives.
- 2 Renewal of the quality assessment framework certification **ISO 9001:2015**
- 3 Development of a main work plan for all the Center's departments including initiatives, budget, risks, and workforce.
- 4 Follow up and monitoring of the Center's projects

## Local and International Workshops

- 1 A training course for **(15)** employees on Change Management
- 2 An introductory workshop for the Center's staff about the quality management system.

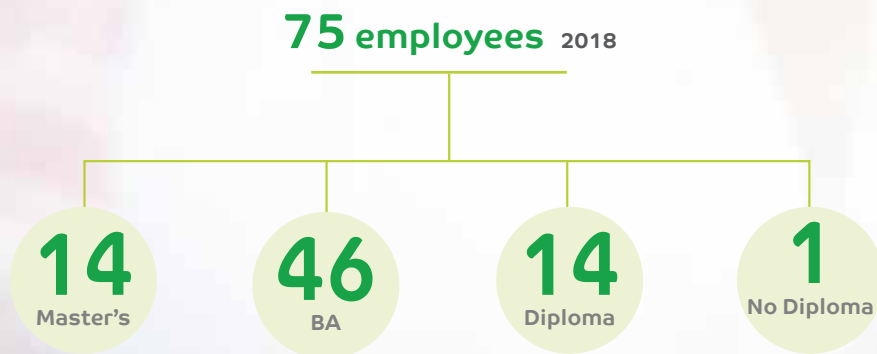




## Human Resources

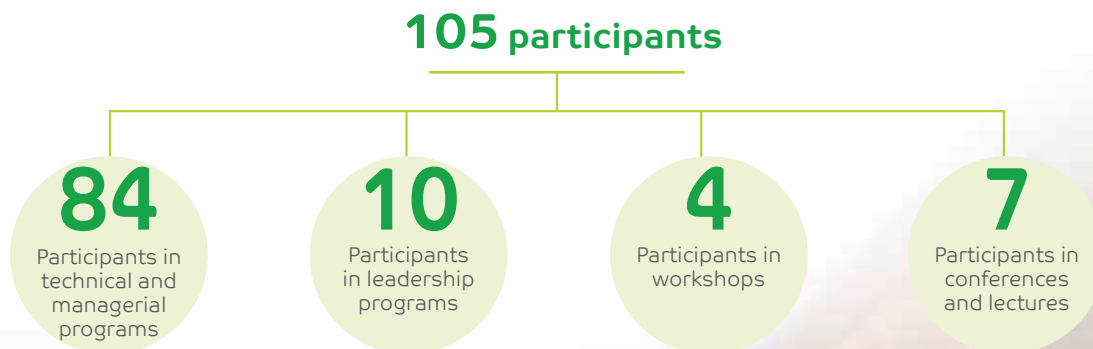
### The Center's Employees

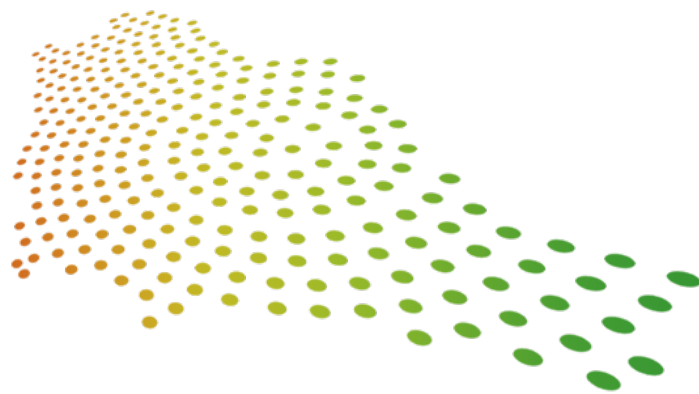
The center pursued its strive to attract and preserve outstanding and efficient staff, in addition to developing their skills and increasing their capacities through workshops, conferences, and lectures at the local and international levels, in addition to specialized training courses.



## Training Programs and Conferences:

The Center implemented a training plan for its staff in the financial year of 2018 including leadership, technical, and management training courses of different types in the Kingdom and abroad. The Center also allowed their participation in several international conferences, lectures and exhibitions. (105) employees took part in the international events as follows:





Energy Efficiency



**كفاءة**

المركز السعودي لكفاءة الطاقة  
Saudi Energy Efficiency Center