



Energy & Minerals Regulatory Commission Annual Report

2018

Quotations by His Majesty King Abdullah II Bin Al-Hussein:

- ♣ Jordan's vision is based on solid pillars. Jordan is a state of law, a state of production, and a human-centered state. Jordan is a nation with a sublime message. Within these principles, it is quite clear what distinguishes Jordan and makes it a state and community in a continuous movement for the better.
- ♣ Jordan, as a state of law, will not allow law enforcement to be selective. Justice is the right of all, and corruption will not be allowed to become a chronic disease. I confirm here that the institutions of the state are able to root out corruption and to hold those who manipulate public money accountable.
- The state of production that we aspire seeks to acquire the elements that support its economic independence. Jordan is moving forward with a strong determination to a culture of opportunity and self-reliance. In this spirit, we can achieve our major projects, including energy, infrastructure, attracting investment and support for agriculture. The most important achievement in this field is to stimulate the spirit of excellence, dedication and proficiency.
- **♣** Jordanian people are our true wealth. We affirm their right to quality services, to be provided with knowledge, learning, and technology skills to be able to contribute to the development of the nation, to cope with the world's developments. The global economy is changing very rapidly, which calls for increased efforts.
- This is the vision and approach, which we have always expressed and emphasized. It is based on three main pillars, which all Jordanians seek to achieve: First: A firm and fair state of law. Second: Impervious and growing economy that is characterized by openness and flexibility. Third: Basic services provided to Jordanians.

Board of Commissioners:



Chairman of the Board of
Commissioners
CEO
Eng. Farouq Al-Hiyari



Deputy Chairman of the Board of Commissioners Eng. Wejdan Al-Rabadhi

Members of the Board of Commissioners:



Commissioner Dr. Majd Al-

Commissioner
Mr. Bashir Al-Srour



Commissioner Dr. Ali Swareh

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Message from the CEO



I am pleased to invite you to review the role of the Energy and Minerals Regulatory Commission in the field of regulation, control and competition in the energy and mineral sector for 2018. EMRC role is concentrated in the three pillars referred to by His Majesty King Abdullah II in his speech, with which he inaugurated the proceedings of the Third Regular Session of the 18th Parliament. These pillars are: a firm and fair state of law; impervious and growing economy that is characterized by openness and flexibility; and basic premium services provided to Jordanians.

EMRC has been keen to implement and enforce the laws, regulations and instructions related to EMRC regulatory works in electricity, renewable energy, petroleum derivatives, radiation protection, nuclear security and safety, natural resources and regulation of the sector on the basis of balance between the interests of consumers, licensees, investors and any other stakeholders, maintaining the interests of consumers, and maintaining and improving the efficiency of the structure of the sector, ensuring the provision of safe, stable, durable and high quality services, providing public safety conditions and requirements, and protecting the environment and human health and property, in accordance with the provisions of legislation related to the organization of the sector.

EMRC cooperates with various national, regional and international institutions, expands channels of communication and strengthens ties of cooperation with local, regional and international bodies.

There are significant and remarkable achievements across all sectors of the Commission's work. Since EMRC establishment in 2014, we, the Board of Commissioners, CEO, and all the employees of the Commission take pride in it. EMRC will continue to intensify its efforts and activities to achieve its mission, which includes ensuring the provision of safe, stable, durable and high quality services at reasonable prices by the continued development of regulation, control and competition in the energy and minerals sector, safe use of nuclear energy and ionizing radiation in peaceful areas to ensure the interests of consumers and investors.

We are determined to continue to implement our successful plans and programs in various fields, including providing our young cadres with the opportunities to actively participate in all works, functions and activities of the Commission towards leadership, excellence and creativity at the national and international level.

Chairman of the Board of Commissioners CEO Eng. Farouq Al-Hiyari

EMRC Mission, Vision, and Values

Vision:

To become a pioneer in regulating and developing the sector of energy, minerals, and radiation and nuclear applications in a peaceful, secure and sustainable manner.

Mission:

To ensure secure, sustainable, durable, high quality and affordable services, through advancing regulation, supervision, and competition in the energy and minerals sector, and the uses of nuclear energy and ionized radiation in peaceful areas to ensure the interests of consumers and investors.

Core Values:

- Transparency, integrity and justice.
- Maintaining competitiveness.
- Teamwork spirit.
- Continuous improvement of performance.
- Motivation.
- Quality control and assurance.
- Community responsibility.
- Initiative and creativity.
- Cooperation, coordination and integration with partners.

Administrative regulation, organizational structure and staff distribution for 2018

The administrative framework of EMRC is regulated by the Administrative Organization Regulation No. (88) of 2018.

Under this Regulation, the organizational structure of the Commission consists of the Board of Commissioners, CEO, the departments, directorates and units shown in Figure (1).

Figure (1)

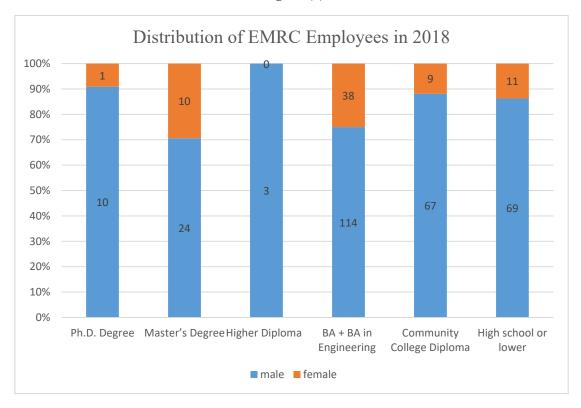
Energy Section Energy nservation Section Refining latural Gas ransporting and Handeling Section Cycle Section Nuclear Refeguards Section Nuclear Energy Reactors Section Nuclear Safety rectoral Administration of Radiological and Nucl Affairs Facilities Safety and Emergencies Section Borders Control Section Quality nageme Unit Board of Commission Studies and Quarries Licensing Section Mines and Quarries Follow-up and Inspection Section Oil Shale Section Chairman of the Board of Commissioners / CEO Electricity Tariffs Section Section Contracts and Agreements Section Consultants Affairs rectorat Electronic Government Section Systems Section Public Service Section planning Section formation Section National Registry Section Follow up Section Control Judicial Control Unit Institutional Performance Development Section Human Resources Planning Section Technical Centrol Section Human Resources Development Section Administration of Human and Financial Resources Affairs Records Section Services Section Section Budget

Abbreviations:

Kilowatt	kW		
MW	Megawatt		
kWh	Kilowatt .hour		
MWh	Megawatt.hour (1000 kilowatt hour)		
GWh	Gigawatt hour (1.000.000 kilowatt hour)		
KvA	Kilovolt-Ampere		
MVA	Megavolt Ampere		
kV	Kilovolt		
KgOE	Kilogram of Oil Equivalent		
toe	Ton Oil Equivalent		
Km	Kilometer		
km.circuit	Kilometer - Circuit		
m/s	Meter / Second		
μSv/h	Microsievert/hour		

Figure (2) shows the number of staff members of the Energy and Minerals Sector Regulatory Commission amounting to (356) employees in 2018, including (287) male employees and (69) female employees.

Figure (2)



Employees are distributed across the following locations and regions:

- ✓ Head Offices in Amman / Eighth Circle.
- ✓ Control station in Agaba.
- ✓ Radiological control gates at land, air and sea borders.
- ✓ Electricity Distribution Companies / Law Enforcement Agency

Introduction:

Energy and Minerals Regulatory Commission (EMRC) has a legal personality with financial and administrative autonomy. It may, in such capacity, acquire movable and immovable properties necessary to achieve its goals, and to perform all legal acts, including entering into contracts. EMRC is affiliated with the Prime Minister. The Chairman of the Board of Commissioners/Chief Executive Officer represents EMRC before third parties.

EMRC aims to regulate and control energy, natural resources, minerals and radiation and nuclear work and petroleum products in the Kingdom, including:

- petroleum, petroleum products, and natural gas
- oil shale, coal
- biofuel
- generation, transmission, distribution and supply of electric power
- renewable energy
- radiation protection, and nuclear safety and security.

About EMRC □ Legal successor under Government Institutions and Departments Restructuring Law No. 17 of 2014 for: Natural Resources Jordan Nuclear Electricity Authority/ Regulatory Regulatory Regulatory Tasks Commission Commission A Royal Decree was issued to approve the Energy and Minerals Sector Regulatory Commission Law No. 8 of 2017, and was published in the Official Gazette on April 16 2017. Thus, EMRC became the sole regulator of the energy and minerals sector and is affiliated with the Prime Minister. It is the legal successor of the Energy and Mineral

Organizational Structure of the Energy and Mineral Resources Sector as at 2018:

Resources Ministry in the field of the organization of petroleum,

a. Policy and planning:

petroleum products and natural gas sector

The Ministry of Energy and Mineral Resources adopts comprehensive planning for the sector in terms of organization and the development and follow-up of public policies to fulfill the tasks entrusted to it, namely, providing the necessary energy of various forms for the overall development at the lowest cost possible and at the best specifications, in addition to attracting the necessary capital to invest in the various fields of energy, such as electricity generation, production of petroleum products, exploitation of natural resources and local energy resources, especially renewable energy sources.

b. Supervision and regulation:

EMRS is in charge of regulation and control functions of energy, natural resources, minerals, radiation and nuclear sector in the Kingdom, including petroleum, petroleum products, oil shale, coal, natural gas, liquefied natural gas, biofuel, and generation, transportation, distribution and supply of electrical power, renewable energy, radiation prevention, and nuclear safety and security.

c. Institutions operating in the radioactive and nuclear sector:

- **Jordan Atomic Energy Commission**: Jordan Atomic Energy Authority was established in 2008 with the aim of transferring the peaceful uses of nuclear energy and radiation technologies to the Kingdom and developing its use for the generation of electricity, water desalination, and agricultural, medical and industrial fields.
- **Jordan Nuclear Reactor for Research and Training (JRTR):** JRTR is the cornerstone of research and training in nuclear science and technology in Jordan. It provides a strong platform for training and scientific research for nuclear engineering students, other nuclear scientists, engineers and technicians to operate, maintain and develop nuclear reactors. It will be used to produce medical and industrial isotopes to support nuclear applications in medicine agriculture, water and industry at the level of Jordan and the region.
- **Synchrotron** (**Photodiode**): The Synchrotron Center SESAME has been established as the world's first center of excellence in scientific research in the Middle East, similar to the European Organization for Nuclear Research (CERN) in Europe. It is a joint government organization of the region's Member States under the auspices of UNESCO and hosted by Jordan in the town of Alan, Balqa Governorate.
- **Subcritical System (JSA)**. The Jordanian Subcritical Nuclear System was built and operated on the premises of Jordan University of Science and Technology (JUST), as the first nuclear facility in Jordan for education, training and scientific research purposes in order to increase the experimental knowledge of JUST nuclear engineering students and to conduct practical experiments for the fundamentals of reactor engineering.
- Radioactive Waste Management Facility: A facility for handling, processing, adapting, temporary or permanent storage (demolition) of radioactive wastes.
- Medical institutions totaling **510** medical facilities authorized to practice radioactivity business using radioactive sources.
- Industrial Institutions: 166 industrial facilities authorized to practice radioactivity business using radioactive sources.

d. Institutions operating in the electricity and renewable energy sector:

1. The National Electric Power Company is a government-owned public shareholding company whose mission is to build, operate and maintain the transport system within the Kingdom's borders, in addition to the transportation system that connects the electrical system with the electrical systems of other countries through expanding the construction of generation units through the private sector and/or the public sector.

2. Traditional power generation companies:

Seven companies that are responsible for generating electricity from traditional sources and selling them to the National Electric Power Company as follows:

- **Central Electricity Generation Company**, a public joint stock company that is engaged in the generation and wholesale sale of electric power to the National Electric Power Company. It was established in 1999. The Company's capacity is 1001 MW.
- Samra Electric Power Generation Co. (SEPGCO), a private shareholding company fully owned by Government, whose mission is to generate electricity and sell it to the National Electric Power Company. It was established in 2004. The Company's capacity is 1245 MW.
- **AES-Jordan PSC** (**Al-Manakher**), a private company owned by the US MESUI and the Japanese MITSUI, which is responsible for generating electricity and selling it to the National Electric Power Company. It was established in 2009. It owns the first private sector project in Jordan under the patronage of His Majesty, which is East Amman/Al-Manakhir Plant that was officially inaugurated by King Abdullah II Ibn Al-Hussein on 26/10/2009. The Company's capacity is 370 MW.
- **Al Qatrana Electric Power Company**, a private company owned by the Korean Company KEPCO and the Saudi Company XENEL. The Company was established in 2010 to generate electricity and sell it to the National Electric Power Company. The Company's capacity is 373 MW.
- Amman Asia Electric Power Company, a private company owned by the Korean Company KEPCO and the Japanese Company MITSUBISHI, whose mission is to generate electricity and sell it to the National Electric Power Company. It was established in 2014. The Company's generating capacity is 573 MW.
- **AES Levant**, a private company owned by the US MESUI and the Japanese MITSUI, whose mission is to generate electricity and sell it to the National Electric Power Company. It was established in 2014, and its capacity is 241 MW.
- **Zarqa Electricity Generation Company**: A private company owned by the Kingdom Company and the Red Sea Company., with a capacity of 485 MW.

3. Electric Power Distribution Companies that sell electricity to the end consumer as follows:

- **Jordan Electricity Company**, a public shareholding company that distributes electrical power in the capital, Zarqa, Madaba and Al-Balqa, with the exception of the Central Jordan Valley area. On 29/5/2014, the Company was granted a 20-year license
- **Irbid Electricity Company,** a public shareholding company that distributes electricity in the governorates of Irbid, Mafraq, Jerash and Ajloun, with the exception of the Northern Jordan Valley and the eastern regions. In 2008, the Company was granted a 25-year license.
- **Electricity Distribution Company**: A public shareholding company that distributes electrical power outside the concession areas of Jordan Electricity Company and Irbid Electricity Company, specifically in the Southern, Eastern and Jordan Valley area. In 2008, the Company was granted a 25-year license.

4. Companies operating in the renewable energy sector:

- Companies engaged in renewable energy projects, through direct proposals system: Projects that are implemented and operated through tenders announced by the Ministry of Energy and Mineral Resources and a direct proposals committee that considered the documents of the 30 companies that submitted these tenders and were subsequently licensed by EMRC.
- Companies with special generation-consumption licenses: 37 projects (companies) intended to cover the consumption by a specific establishment and are licensed by EMRC, if their capacity is greater than 1 MW, whether in accordance with the system of net measurement or transit transport.
- Companies engaged in the supply, installation, operation, maintenance and inspection of renewable energy sources systems: 313 renewable energy companies or individual institutions that are engaged in this field and have been licensed by EMRC based on the instructions of persons engaged in renewable energy.

e. Institutions operating in the natural resources sector:

Institutions operating in the mining rights field: 60 institutions that explore, extract and exploit minerals or their derivatives within a specified period of time. Institutions operating in quarries: 235 institutions that are engaged in the extraction of stones and their derivatives.

- **g.** Oil and natural gas institutions, which carry out oil and gas exploration operations within the Kingdom as well as crude oil refining operations and sale of oil derivatives:
- National Petroleum Company, a government-owned public shareholding company that carries out oil and gas research and production activities in the concession area located in the northeast of the Kingdom on the Iraqi borders, covering an area of 7,000 sq. km, which includes Al-Risha Gas Field, which is about 1500 sq. km long. This 50-year concession came into force in 1996.
- Jordan Petroleum Refinery Company, a public joint stock company responsible for refining crude oil and producing and distributing oil derivatives within the Kingdom.
- Jordan Logistics Company for Petroleum Facilities: A private joint stock company established in 2015. It is the first independent provider of open-access storage in Jordan to provide storage, handling, transportation, fueling and world-class storage services to local and regional oil customers. The Company offers integrated oil storage and logistics services across Jordan. In addition to design, construction, operation and maintenance of private storage stations in line with the regulatory and international standards.
- The Egyptian Jordanian Fajr Company for the transportation and supply of natural gas, a limited liability company operating under the License Agreement signed on January 25, 2004 between the Jordanian government, represented by the Ministry of Energy and Mineral Resources, and the Egyptian Jordanian Fajr Company, which is tasked to build, own and operate the natural gas pipeline from Aqaba to the north of the Kingdom, receive Egyptian natural gas in Aqaba and transport it through the pipeline and sell it to power plants and major industries.
- Oil Products Marketing Companies: 3 privately owned companies engaged in the distribution of oil derivatives (benzene, diesel, kerosene, jet fuel).
- **Fuel stations** owned by legal or natural persons concerned with the sale of fuel to citizens. The number of operating fuel stations amounted to 604 until the end of 2018.
- Central gas distribution companies, privately owned companies involved in the distribution of gas in tanks. The number of these companies amounted to 6 operating companies in 2010.
- Gas warehouses, which are repositories owned by legal or natural persons concerned with transporting liquefied gas cylinders from filling stations to warehouses and then supplying distribution vehicles that belong to licensed distribution agencies. The total number of warehouses reached 123 by the end of 2018.
- **Gas agencies**, which are owned by legal or natural persons concerned with the distribution of gas cylinders to citizens. The number of operating agencies reached 624 agencies until the end of 2018.

National Objectives

- Improve the level of services provided to citizens and the fairness of their distribution.
- Create an attractive investment environment capable of attracting foreign capital and encourage local investment.
- Maintain financial and monetary stability, control the budget deficit, and develop an efficient and low-risk financial system.

Corporate Objectives

- Regulate the energy and minerals sector on the basis of balance between the interests of consumers, investors, licensees and any other stakeholders.
- Maintain the interests of consumers provided that they comply with the conditions of providing the services approved by EMRC, which are provided by the licensees.
- Maintain an efficient environment for the sector, which will enhance the economic feasibility of the sector and improve its efficiency.
- Ensure the provision of secure, stable, durable and high-quality services in the sector.
- Ensure the provision of public safety conditions and requirements and protect the environment and human health and property.
- Ensure that the services required from licensees are provided to consumers sufficiently and with high quality.

Strategic Objectives

- Regulate the energy and minerals sector on the basis of balance between the interests of consumers, investors and licensees and any other stakeholders.
- Develop an effective control and inspection system for the sector to improve and enhance the confidence of consumers and investors and achieve competitiveness and protect people and environment.
- Develop cost-based pricing systems and methodologies to ensure improved performance and lowest costs
- Enhance EMRC efficiency and effectiveness.

EMRC Duties and Powers:

- Granting permits and licenses to persons operating in the energy and minerals sector.
- Verifying the compliance of the licensees with the application of the provisions of the laws related to the regulation of the sector.
- Monitoring the licensees to ensure their compliance with the provisions of the laws related to the sector regulation and the permits and licenses granted thereto. For this purpose, EMRC may conduct inspection of any entity or any other body.
- Participating in developing the technical standard specifications or rules related to the equipment, facilities and materials pertaining to the sector, in consultation with other stakeholders.
- Participating with the competent authorities in the development of the necessary requirements for the implementation of environmental conditions to be met by the sector's facilities and establishments, in accordance with the legislation in force.
- Building an integrated information system for the sector.
- Any other functions or powers related to EMRC activities, in accordance with the provisions of the legislation related to the regulation of the sector.

Major Services:

- Receiving and handling complaints 24 hours a day, in addition to information requests.
- Granting licenses to nuclear establishments and facilities, radiation institutions and licensing radiation workers.
- Granting import, re-export or transit of radioactive materials or equipment permits, and corporate license for the transport of radioactive materials.
- Conducting lab examination of samples and issuing radiation-free certificates.
- Determining electricity tariffs for subscribers in all sectors (household, commercial, industrial, agricultural, banks, hotels, telecommunications,). Determining electricity tariff for electricity companies and approving electricity meters.
- Licensing electricity companies and electricity generation companies using renewable energy sources systems.
- Licensing persons engaged in the supply, installation, operation, maintenance and inspection of renewable energy sources systems.
- Granting permits and licenses to public and private electric charging stations for electric vehicles.
- Granting or renewing exploration licenses and mining rights for exploitation of natural resources (e.g. phosphate, potash, limestone, silica, pozzolana, dolomite, calcium carbonate, copper .etc.), and granting licenses for quarries/crushers.
- Granting licenses to export mineral raw materials, stone products and Dead Sea salts.
- Licensing consultancy services for mining rights studies
- Granting licenses to oil refineries, crude oil pipelines, pipelines for transporting oil derivatives, filling stations and gas cylinders.
- Granting licenses for fuel stations, gas distribution warehouses and distribution agencies, and distribution of central gas.
- Granting a license to the storage facilities of crude oil and its derivatives, and licensing the distribution and marketing of oil derivatives.
- Granting licenses for the import and sale of natural gas, transfer of natural gas by pipelines and supply of natural gas to generate electricity and industries.
- Granting a license to operate an industrial and bio-fuel production plant.
- Granting petroleum coal, coal and high viscosity fuel import licenses.

Executive Summary:

All EMRC works, functions and activities in the organization, control and pricing of the relevant sectors are summarized as follows:

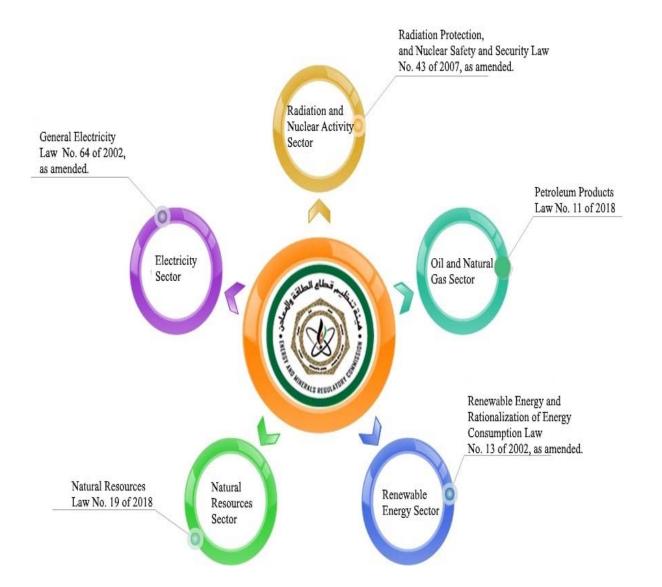
- 1.All legislation, regulations and decisions governing the sector approved by the Board of Commissioners take into consideration the comprehensive economic and strategic incentive plans of the energy sector, EMRC strategic plan, and the priorities of the Government within the framework of a firm and fair state of law and an immune and growing economy characterized by openness, flexibility and ensuring safe, stable, durable and high quality services, through the licenses and permits issued by EMRC.
- 2. Prioritizing nuclear safety (Nuclear safety first) and providing the necessary resources for capacity building, in accordance with the law in force and its legislation, the requirements of the International Atomic Energy Agency, and the recommendations of the International Advisory Committee for the Jordanian Nuclear Program. This led to Jordan's recognition by the International Atomic Energy Agency that EMRC has effectively succeeded in completing its capacity in the regulation and control of the nuclear sector and radioactive sources used in the medical and industrial fields through the Agency's comprehensive review of the matter during the years 2014-2017, the management and operation of (65) radiation detection portals that cover all land, sea and air border ports in the Kingdom. The regulatory measures undertaken by EMRC on the border crossing points of the Kingdom in 2018 resulted in detecting 3 radiation contaminated shipments, which were returned to the country of origin.
- 3. Implementation of plans to reduce the technical and non-technical losses in the electrical network (transmission and distribution) to reach 12% in 2020. EMRC binding procedures on electricity companies to reduce the technical and non-technical electricity loss led to compliance by electricity distribution companies with these plans. As a result, these companies achieved the target losses by EMRC and continued to address the phenomenon of illegal use of electric power and assault of the components of the electrical system.
- 4. Eliminating distortions in electricity tariffs and gradual reduction of interconnection to ensure the reduction of costs for productive and service sectors and create competitiveness. Electricity tariff revenues for 2018 covered the vast majority of the electrical system cost by approximately JOD 1.6 billion. Fuel price difference item revenue for 2018 also covered part of the electrical system cost by about JOD (245) million. EMRC leads the market in terms of pricing services and activities related to the sector, unlike some activities in other service sectors in which the market sets the price of goods and services. Despite the above revenues, the losses incurred by the electrical system/National Electricity Company have resulted from the subsidy policy adopted for household segments with a consumption of only 600 kWh / month, small and medium industrial sectors, hotel and agricultural sectors and non-coverage by owners of renewable energy sources of the costs of the electrical system.

- 5.Stimulating the natural resources sector, increasing its value-added and the continued prohibition of any quarry license or renewal of the mining right for any entity that does not carry out rehabilitation work in accordance with the approved rehabilitation plan and addressing the phenomenon of excessive mining of some lands without a license and enforcing the reform plan for mining rights approved by the Commission.
- 6.A comprehensive plan has been put in place to implement the electronic transformation of all EMRC operations, activities and services. The engineering of the procedures for its self-services that are approved by the Ministry of Public Sector Development/Corporate Development has been completed, pending the approval of the Ministry of Communications in this regard.
- 7. Streamlining procedures and providing services through one window (Public Service Office), which has become an example for many public and private institutions.
- 8. Active participation in King Abdullah II Award for Excellence in Government Performance and Transparency and obtaining second place by the participating institutions for the first time at their request without entering the qualification stage. EMRC obtained the ISO 9001 certificate and it continues its procedures for obtaining IT quality certificates (ISO 170001), analysis and measurement labs certification ISO 17025, and inspection system ISO 17020 to achieve leadership, excellence and creativity in this field.
- 9. Intensifying daily field control over the performance of licensees through specialized technical teams for all sectors and handling the complaints of citizens and investors in accordance with the legislation and control of the sector and 24 hours.
- 10. Transferring financial surpluses of JOD 8.24 million to the Ministry of Finance in 2018. EMRC revenues for 2018 amounted to JOD 13.6 million. The said revenues do not include the revenues of unpaid license renewal fees due from the National Electric Power Company, amounting to JOD (3.1) million.
- 11. The operator of the energy and minerals sectors is the private sector through more than 5000 licenses and permits granted to it, including permits and licenses granted to natural persons, except for (3) government companies with special systems in the sector. This requires EMRC to continue its regulatory and control functions by continuing to supervise and control the energy and mineral sector in order to achieve the general facility principles, support investment and ensure the objectivity and balance in all decisions issued by the Commission.

First: Sectors organized by EMRC under the legislation in force

Figure 3 shows the sectors regulated by the Energy and Minerals Regulatory Commission and the legislation governing its work.

Figure (3)

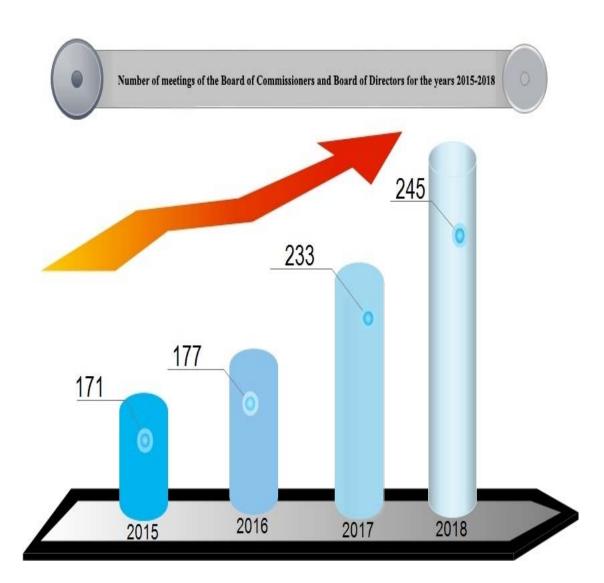


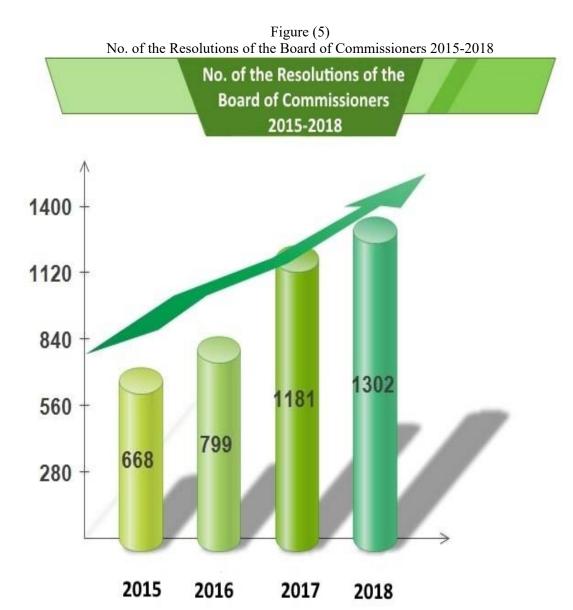
Second: Decision making

The Board of Commissioners held 245 meetings in 2018, in which 1302 decisions were adopted, as shown in Figure 4 and Figure 5 below.

The Board ensures the adoption of its administrative decisions and the arrangement of the legal positions without delay in order to achieve the public facility principle, which ensures progressive sustainability of public facilities.

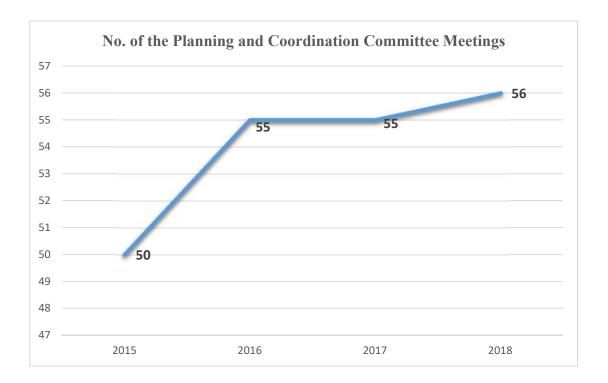
Figure (4) Number of meetings of the Board of Commissioners and Board of Directors for the years 2015-2018





In 2018, the Planning and Coordination Committee held 56 meetings in which it discussed all the subjects entrusted to it under EMRC Administrative Organization Regulation No. 88 of 2018, as shown in Figure 6 below.

Figure (6)
Number of meetings of the planning and coordination committees for the years 2015-2018, according to the Organization Regulation



It should be noted that numerous activities were carried out by EMRC Planning and Coordination Committee, through field campaigns, meetings with the strategic partners of the Commission, working on shifts at EMRC Monitoring and Emergency Center during emergency weather conditions and unannounced false emergencies to verify the readiness of the licensees, participating in the Public Service Office and attending the majority of the meetings of the Board of Commissioners.

The effective participation of the Planning and Coordination Committee in carrying out the tasks entrusted to it under the administrative management system and other tasks entrusted to it as planned or designated has contributed significantly to the achievement of the objectives of the Commission and to the facilitated provision of services to customers.



Radiation and Nuclear

Work

a. In the field of regulation

- 1. Legislation, policies, documents and regulatory decisions. The following was completed:
- Developing draft regulations and instructions regarding the nuclear fuel cycle and radioactive waste management, in accordance with international practices, as follows:
 - o Drafting radioactive waste and spent nuclear fuel treatment regulation.
 - O Drafting instructions for the stages of licensing radioactive waste treatment facilities.
- Drafting nuclear facilities licenses and permits fees regulation, including research reactors and radioactive waste management facilities, in addition to the personal licenses of their employees.
- Issuing "Licensing Instructions for the Provision of Technical and Advisory Services in the Field of Radiation Protection and Nuclear Safety", and enforcing these instructions as of 23/5/2018.
- Issuing "Instructions for training radiation personnel in relation to patient protection", and enforcing these instructions as of 8/14/2018.
- Drafting instructions for safety of nuclear power reactors.
- Modifying the instructions for the review of Environmental Impact Assessment report based on a workshop with IAEA and drafting a checklist to review environment impact report.
- Drafting instructions for accreditation of the specialized rehabilitation and training program and licensing personnel working in nuclear power plants.
- Revising the national policy for the management of radioactive waste and spent fuel in cooperation with the competent authorities.
- Developing the national strategy for the safe disposal of radioactive waste and spent fuel and developing a plan of action for the implementation of the strategy.
- Developing the national report of the Joint Convention on the Safe Disposal of Radioactive Waste and Spent Fuel in cooperation with experts and other relevant parties.
- Developing principles of accreditation and qualification of nuclear inspectors including various aspects of the requirements, general skills and specialized training of nuclear inspectors
- Developing the General Nuclear Facilities Inspection Manual.
- Issuing the Annual Environmental Radiation Survey Report 2018.
- Issuing a regulatory decision for licensed radiological institutions to import radioactive materials or radiological devices in favor of these institutions, within the nature of the practice, under a permit only and without obtaining an import license. These institutions import sources and devices to be used in the same institution and for the same objectives of the institution.
- Issuing a regulatory decision to adopt the proposed wording for the memorandum of understanding proposed to be initially signed between EMRC and the Ministry of Health to cooperate in the implementation of radiation protection requirements in preparation to be duly signed by the parties.
- Issuing a regulatory decision to adopt a memorandum of understanding between EMRC and Middle East Scientific Institute for Security for the establishment of a training center on radiation detection, which was duly signed.

Finalization of legislation, policies, documents and regulatory decisions mentioned above has contributed to 100% completion of these projects and programs in accordance with EMRC Strategic Plan 2018.

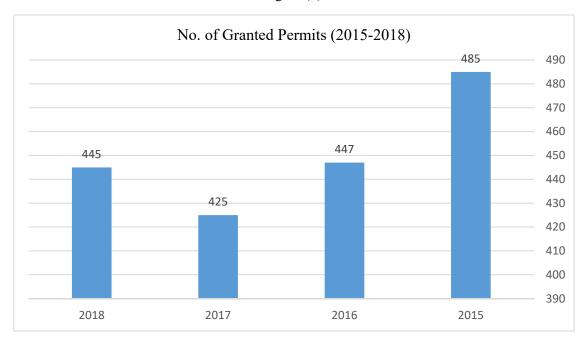
• Permits and Licenses

2.1. Radiation Protection

• Granting 445 permits for import, transportation, transit, and re-export radiological devices and radioactive materials.

Figure 7 shows the number of permits granted (import, transport, transit and re-export of radiological devices and radioactive materials)

Figure (7)



• **Issuing 872 institutional licenses.** Industrial licenses granted to establishments amounted to 33% of the number of institutional licenses. Medical licenses amounted to 67% of the total number of institutional licenses.

Tables 1 and 2 respectively show the number of medical and industrial licenses granted over the years 2015-2018.

Table (1)

No. of Medical Licenses				
Year	2015	2016	2017	2018
No. of Licenses	563	690	675	584

Table (2)

No. of Industrial Licenses				
Year	2015	2016	2017	2018
No. of Licenses	136	152	225	288

Issuing 1437 personal licenses, including 45 licenses for radiation workers in Jordan Research and Training Reactor (JRTR)

Figure (8) shows the number of personal licenses for radiation work for the years (2015-2018)

Figure (8)

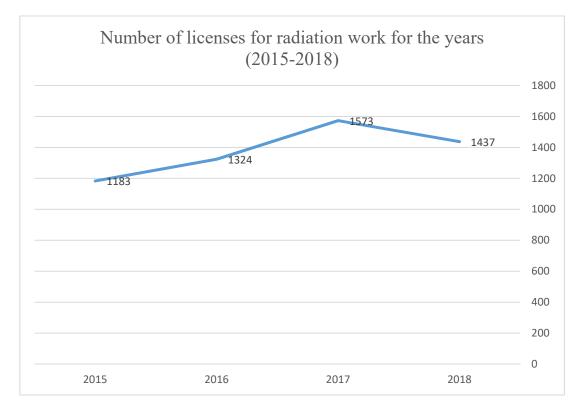
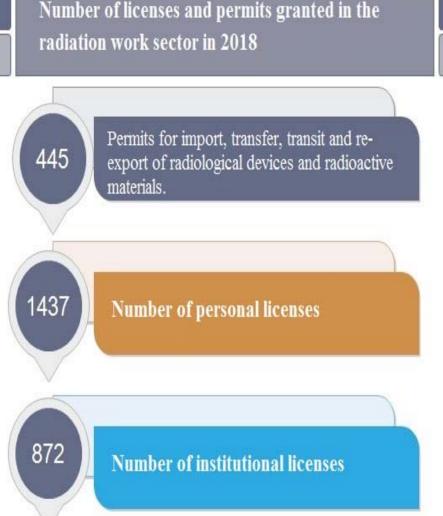


Figure (9) below shows the number of licenses and permits granted in the radiation sector in 2018.

Figure (9)

Number of licenses and permits granted in the radiation work sector in 2018



The number of imported and exported radiation materials and radiological devices amounted to 3035, as shown in Figure 10.

Figure (10)

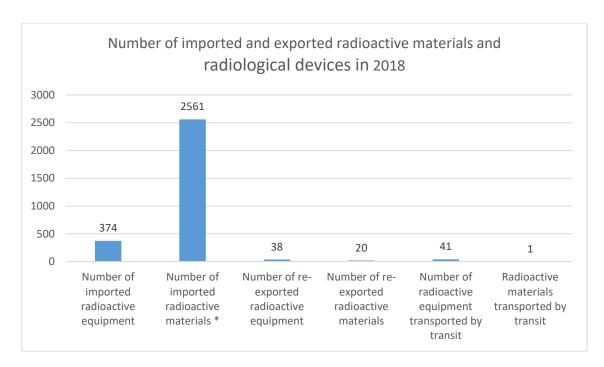


Table (3) shows the number of imported and exported radioactive materials and radiological devices during the years (2015-2018).

Table (3)

Number of imported and exported radioactive materials and radiological devices				
Year	2015	2016	2017	2018
Number of imported radiological devices	406	401	381	374
Number of imported radioactive materials	3,374	1276	1191	2561
Number of re-exported radiological devices	6	1	10	38
Number of re- exported radioactive materials	21	20	11	20
Number of radiological devices transported by transit	11	14	10	41
Number of radioactive materials transported by transit	994	2	4	1

2.2. Jordan Research and Training Reactor (JRTR):

- Issuing (2) personal licenses for the Senior Reactor Operators (SRO) and (6) licenses for the Reactor Operators(RO) in the Jordan Research and Training Reactor (JRTR) after passing the examinations of EMRC in this regard.
- Issuing an annex to the license of the Jordan Research and Training Reactor (JRTR) upon satisfaction of the conditions stipulated in the license.

2.3. Radioactive Waste Treatment Facility (RTF):

• Issuing a standard operating license for a Radioactive Waste Treatment Facility (RTF)

a. In the field of control:

1. Radiation protection

• Conducting inspection tours in (406) medical and industrial institutions in possession of radioactive sources and devices to ensure that these institutions provide safety and radiation protection requirements and radiation security for the radioactive sources specified in the laws, regulations and instructions in force.

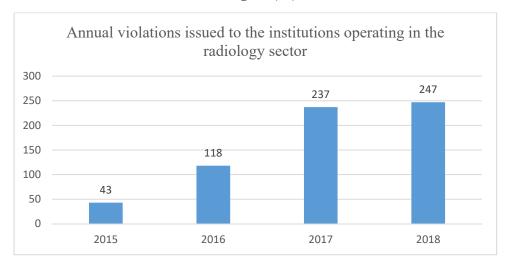
Figure (11) below shows a comparison of the inspections carried out on institutions operating in the radiation sector for the period 2015-2018.



Figure (11)

Figure (12) below shows the total annual violations by enterprises operating in the radiation sector for the period 2015-2018.

Figure (12)



• Implementation of the project to remove high-risk radioactive cesium used in blood irradiators as part of the global initiative to reduce threats related to the use of this substance and replace it with X-ray technology through coordination with the US Department of Energy.

Figure (13) below shows the achievements in 2018 in the field of radiation protection

Figure (13)



2. Control over the implementation of the Jordanian nuclear program for peaceful uses The achievements of EMRC in the control of the implementation of the Jordanian nuclear program, by nuclear facility, are as follows:

Jordan Research and Training Reactor (JRTR):



- Developing a special inspection program for JRTR in cooperation with the International Atomic Energy Agency (IAEA) that covers all administrative and operational activities of the reactor detailed over 12 inspection fields, namely: limits, operational conditions, safety culture, safety committees, management and operation of the reactor, training and qualification, operational practices, maintenance, periodic testing, modifications and additions, uses and experiments, management system, radiation protection and radioactive waste management.
- Developing the annual and periodic inspection plan in the light of reviewing the relevant documents and reviewing and auditing JRTR reactor trip.
- Conducting periodic inspections of JRTR to verify the commitment of the licensees to the requirements of nuclear safety, and to review the operational status, work progress and activities related to the work of the reactor.
- Conducting an inspection visit by JRTR inspectors to simulate the inspections within the task of IAEA experts to review the inspection program on the reactor, especially with regard to the technical and operational limits and radiation protection requirements.
- Conducting a joint inspection visit with the Ministry of Environment on JRTR to verify the licensee's commitment to environmental aspects to submit the annual environmental report. The visit included reviewing the report of the radiological control of annual releases and the report on monitoring radiation levels in the elements of the surrounding environment and the readings of the meteorological tower and files of maintenance that was carried out for the equipment in 2018.

Radioactive Waste Treatment Facility (RTF) of JRTR

• Completing the study and review of Safety Analysis Report (SAR) and the supporting documents, namely the report of the radioactive waste management program, including Waste Acceptance Criteria(WAC), report of the shielding calculations for the radioactive waste treatment plant, radiation protection program, security and emergency plan/part related to the Radioactive waste Treatment Facility (RTF) and quality assurance program, including the training and qualification of facility staff, and the results of the tests of entry into the service.

- Conducting 5 inspection tours to the radioactive waste treatment facility, including verifying the theoretical and practical qualification and training of the employees of the facility, commissioning of the systems used in the facility, radioactive waste management program, including radioactive waste management procedures of radioactive waste management inside JRTR and RTF. Verifying the storage rooms of radioactive waste of various types arising from the operation of the reactor systems and the radioisotope production rooms, in addition to liquid waste sumps and the treatment and storage rooms of RTF and the systems operating therein, in addition to reviewing the documentation of the various work procedures and licensing documents.
- Conducting a joint inspection visit with the Ministry of Environment to JRTR to verify the licensee's commitment to the environmental requirements.

Jordan Subcritical Assembly (JSA) at the Jordan University of Science and Technology (JUST)

EMRC inspected and verified the physical inventory of nuclear materials and design information under the Comprehensive Nuclear Safeguards Agreement signed with IAEA, accompanied by IAEA inspectors during the inspection visit to the subcritical assembly at the Jordan University of Science and Technology.

Nuclear Power Plant

- Participating with EMRC's Consultant Arabtech Jardaneh and Poyry in the review of the environmental impact assessment documents submitted by Jordan Nuclear Power Company and requesting the Company to comply with EMRC requirements.
- Participating with the Spanish Consulting Company in the review of the site survey and selection reports submitted by Jordan Nuclear Power Company and requesting the Company to comply with EMRC requirements.
- Follow-up with IAEA SEED mission for the review of the responses of Jordan Nuclear Power Company to IAEA's comments on the site suitability report for the nuclear power plant in the presence of the Spanish Consulting Company.

Synchrotron



EMRC carried out (3) inspection tours related to commissioning in preparation for granting operating license and verification of radiation protection measures for workers and researchers.

3. Nuclear Security

EMRC carries out radiation control of all incoming, outgoing and transit materials and consignments through the Kingdom, whether food, industrial or raw materials, to ensure that no radioactive contaminated consignments are admitted to the Kingdom, through the following measures:

Management and operation of (65) radiation detection gates covering all land, sea and air ports in the Kingdom, including (12) new fixed border radiation detection gates added at King Hussein International Airport with the support of the Canadian



Foreign Ministry during 2018. The following actions were taken through these gates:

Conducting 2,397,359 radiation examination of all functions.

Monitoring 52,196 radiation alarms, all of which were handled.

Conducting 4,917 secondary radiation examination using portable devices.

Completing 29,107 transactions through (one window on the ASYCUDA system).

As a result of the control measures carried out by EMRC at the border crossing points of the Kingdom, 3 trucks were seized and returned to the country of origin.

 Carrying out inspection tasks on JRTR to ensure compliance with nuclear security standards and the existence of an emergency plan approved according to EMRC requirements.

Figure (14) below shows the increase in the number of radiation monitoring stations and environmental radiation monitoring stations during the period 2015-2018.

Figure (14)

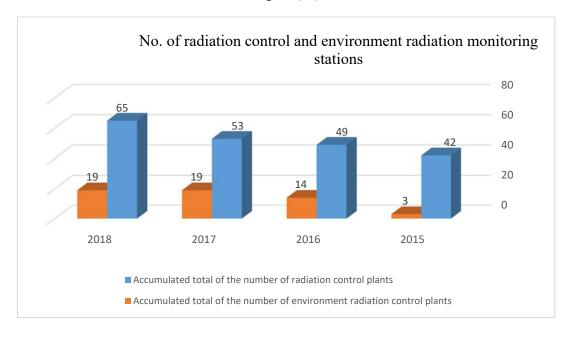
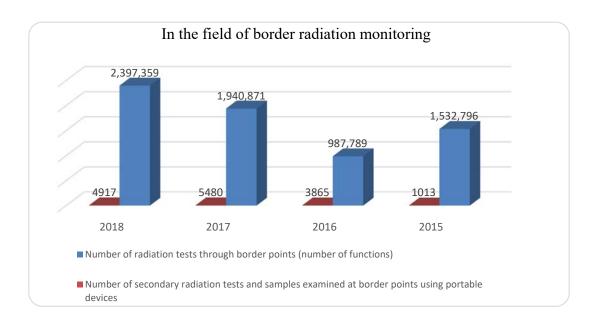


Figure (15) below shows a comparison of the number of radiation operations/tests through the border crossing points (number of incoming, outgoing and transit vehicles through the Kingdom), number of secondary radiation tests and the samples examined at the border crossing points for the period 2015-2018.

Figure (15)



4. Environmental radiation monitoring and laboratory tests

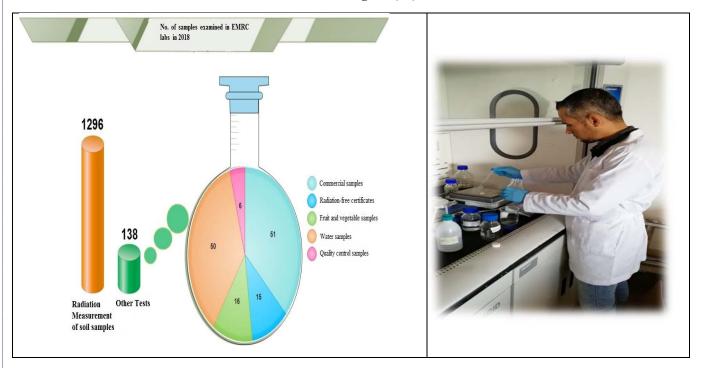
EMRC monitors the Jordanian radiation environment through periodic environmental radiation survey of the various environmental elements and through the 19 advanced environmental radiation control stations across the Kingdom, distributed by governorate as indicated in Table 4 below.

Table (4)
Radiation Monitoring Plants in the Kingdom

Governorate	Location	Number of Plants	Start date of operation
Capital	EMRC Head Office	1	14/1/2017
Tafileh	Qadisiya Air Force Base Civil Defense Directorate in Al-Ayes Central Eberline Plant	1 1 1	10/4/2017 5/12/2016 2001
Karak	Medical Civil Defense Center	1	27/11/2016
Maan	Petra Civil Defense Center	1	29/11/2016
Aqaba	Aqaba Civil Defense Directorate	1	1/11/2016
Zarqa	Birin Civil Defense Center	1	25/10/2016
Balqa	Salt Civil Defense Directorate	1	23/10/2016
Madaba	Madaba Civil Defense Directorate	1	26/10/2016
Irbid	Irbid Civil Defense Directorate JRTR Site Samad Civil Defense Center	1 1 1	13/11/2016 2/2/2017 7/2/2017
Mafraq	Mafraq Civil Defense Directorate Hosha Civil Defense Center Eberline Karama Plant (Jordan-Iraq borderlines)	1 1 1	7/11/2016 2/2/2017 2002
Jerash	Souf Civil Defense Center Eberline Qafqafa Plant	1 1	24/10/2016 2001
Ajloun	Sakhra Civil Defense Center	1	24/10/2016

- 1434 samples received by EMRC from the border centers and public and private institutions were examined. 51 commercial samples, 1296 radioactive soil survey samples, and 16 vegetable and fruit samples were examined. 15 radiation-free certificates, 6 quality control samples, and 50 water samples were issued.
- Ambient air radiation dose was measured, including 5286 radiation survey points by performing 21 tours in all governorates, including 12 tours in Tafila Governorate, using mobile radiation monitoring stations.

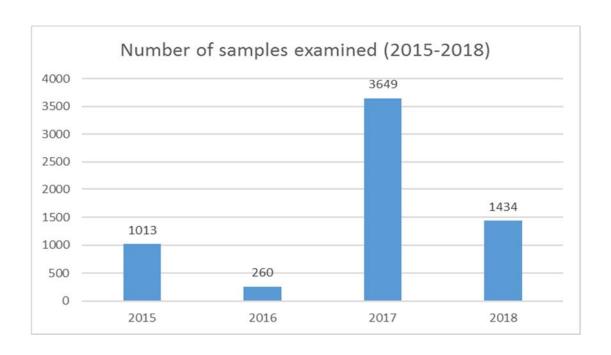
Figure (16)



The number of samples examined in EMRC laboratories, upon the request of various entities and for the purposes of EMRC business in 2018 amounted to (1434) samples.

Figure (17) shows the number of samples examined in EMRC laboratories during the period (2015-2018)

Figure (17)





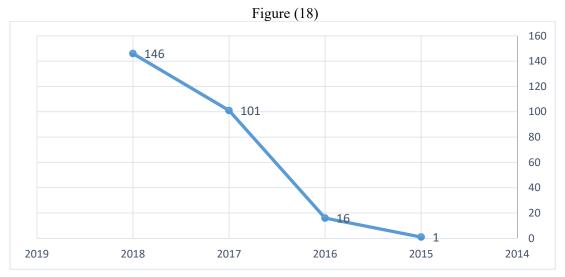
Electric Power Sector

a. In the field of regulation

- Conducting a study to determine the ratios of incentives provided to electricity distribution companies to implement the energy efficiency project to replace fluorescent bulbs in households with LED technology. The ratios are conditional on the installation of 50,000 bulbs by electricity distribution companies.
- Authorizing the National Electric Power Company to engage in the purchase and sale of natural gas to Fajr Egypt for supplying the industries.
- Conducting a study based on which the percentage of electricity losses of the National Electric Power Company for 2018 was determined at 1.65%.
- Conducting a study based on which the rates of customer contribution refund were determined, if their relay substations are canceled.
- Drafting capacity allocation agreement between the National Electric Power Company and VIP consumer, and capacity allocation agreement between the National Electric Power Company, electricity distribution companies and consumers.
- Issuing amended instructions for the regulation of customer power supply disconnection to inform customers before power disconnection via SMS or by any appropriate means.
- A consulting company (Economics Consulting Associate) was retrained. In cooperation with this Company, the costs currently incurred by the electrical network because of the transit projects are considered. The first draft of the instructions for the costs of electricity transit has been prepared, which includes several mechanisms for calculating loss rates and transit fees and they are being reviewed and studied to ensure the accuracy of the indicators presented in this draft. The draft amendment of these instructions is expected to be finalized in the middle of this year.

Finalization of legislation, policies, documents and organizational decisions mentioned above has contributed to 100% completion of these projects and programs in accordance with EMRC Strategic Plan 2018.

Figure 18 shows the regulatory documents and interpretations that were prepared or issued for the electric power sector by the end of 2018.



A. Permits and Licenses

- Issuing a license for Pine Sanitary Paper Manufacturing Company for the generation of electric power for the purposes of private consumption (20 MW) using natural gas.
- Issuing 6 operational licenses to operate public and private EV charging stations.
- Granting 6 permits for the establishment of private electric charging stations and 11 permits for the establishment of a public electric charging station.
- Granting 209 permits for the establishment of public relay stations and collecting contributions.

B. In the field of Monitor:

171 specialized inspection tours were conducted to the sites of electricity companies (the
electrical system), to verify the commitment of the licensees to the licensees granted to
them and the legislation in force and the readiness of the main operation centers,
emergency rooms, public service, warehouses, secondary and main relay stations, and
low and medium pressure networks of licensees for emergency response.

Figure (19) shows a comparison of the inspection tours carried out during the last four years, which amounted to 571 inspection tours to the institutions operating in the electricity sector.

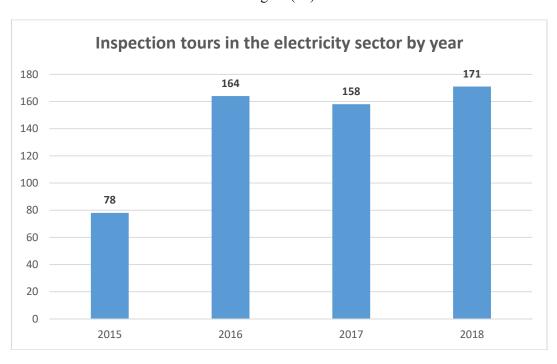


Figure (19)

Illegal use of electric power

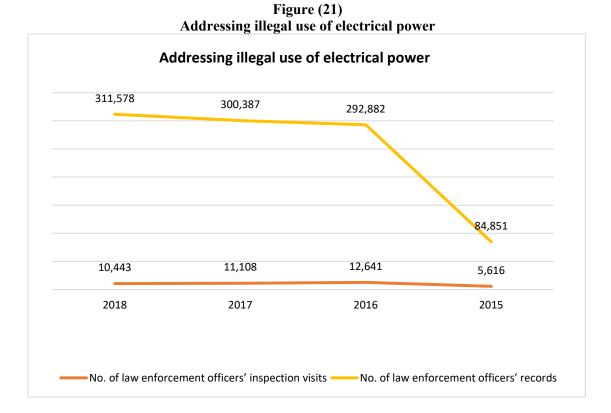
- EMRC continued to activate the judicial control over the performance of electricity distribution companies through the presence of EMRC employees in the offices of electricity distribution companies in the Kingdom. The employees were entrusted with the task of activating the role of judicial control, investigating violations of the provisions of the legislation in force and following up encroachments upon electricity grids. They were entrusted with receiving citizen complaints in order to implement EMRC role in consumer protection and supervise the commitment of electricity companies to providing the services stipulated in the licenses granted to them.
- The total number of cases of illegal use of electric power detected by EMRC in cooperation with electricity distribution companies, public security and gendarmerie was 19962 during 2018.
- EMRC carried out a total of 311578 periodic and scheduled inspection visits, through which 10443 cases of illegal use of electricity were detected. Detected cases by electricity distribution companies amounted to 6768 cases, while the public security forces and gendarmerie forces detected 2,751 cases in cooperation with electricity distribution companies.
- The Commission regularly and continuously trains its staff involved in law enforcement on law enforcement actions, electrical network components and electrical tampering cases.

Figure (20) shows total violation records by EMRC, electricity distribution companies, security and gendarmerie forces in 2018





Figure (21) shows the curve of the number of violation records in the cases of illegal use of electric power and the number of law enforcement records, which shows a clear decrease in the number of violation records. This indicates the effectiveness of control procedures, community deterrence and reduction in the percentage of electric loss.



Approving electric meters

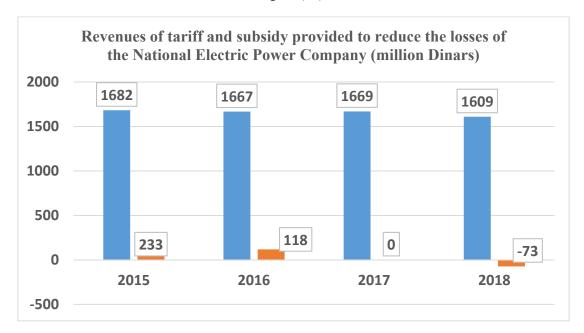
In 2018, EMRC approved a total of 137521 electric meters, with an increase of 3.4%, compared to the meters approved in 2017.

Electricity tariff

- The Commission has completed a comprehensive study of tariff structure to eliminate the disadvantages and current distortions in the tariff structure, according to several alternatives that reflect the main costs of the electrical system, in cooperation with the Spanish Consultancy MERCADOS, by means of a grant by the French Agency (AFD) through the Ministry of Planning and International Cooperation.
- Determining the tariff for charging electric vehicles from public and private charging stations on a monthly basis.
- Determining the value of fuel price difference item on a monthly basis in the electricity bill issued to subscribers.
- Extending the cancellation of the maximum load tariff of the end consumer during the peak period for the period from 1/2/2018 to 31/5/2018.

- Applying small industrial enterprise tariff to regular bakeries instead of commercial tariffs, so that the small industrial tariff applies to all bakeries in the Kingdom (regular, automatic, and semi automatic).
- Approving excess/deficit calculations for Irbid Electricity Company for the fourth tariff period 2014-2015.
- Applying agricultural sector tariff to refrigerators and fridges in apple farms in Shoubak area and any similar agricultural cases.
- Approving weighted average return on capital cost (WACC) for electricity distribution companies for the tariff period (2018-2019).
- Determining the combined tariff (phase 4) between the National Electric Power Company and Samra Electric Power Generation Co.
- Determining the bulk purchase tariff for electricity distribution companies for the tariff period 2018-2019 and on a quarterly basis.
- Standardizing the electrical tariffs applicable to all cement factories in the Kingdom, regardless of the electrical connection point, so that the tariffs of major industries apply to them as of 1/6/2018.
- Introducing a flat tariff for the private hospitals sector for three phases for the period from 1/7/2018 to 31/12/2020
- Amending the electricity tariff for the telecommunications sector and determining it for three periods from 1/7/2018 to 31/12/2020.
- Amending the tariff for public water pumping sector to be equal to cost and applying actual fuel price difference achieved monthly on this sector as of 1/7/2018.
- Setting a limit of (10) fils/kWh for fuel price difference item for medium industrial sector and applying maximum load tariff as of 1/7/2018.
- Setting a threshold for the tariff of small industrial sector, by no more than the tariff of the average industrial sector.
- Applying the regular tariff to the subscriptions of all branches of the Cities and Villages
 Development Bank in the Kingdom, since this Bank is an official public institution and is
 not among the banks licensed by the Central Bank.
- Applying fuel price difference item to the subscriptions of renewable energy sources systems, for power generation to cover their consumption, either using net measurement system or the transfer system by transit over the net amount of electricity of subscription, which represents the difference between the energy extracted from the grid and the energy exported to the grid, with effect from 1/7/2018.
- Applying the commission of the owner of public electric vehicles charging station at the rate of 35 fils/kWh instead of 25 fils/kWh, with effect from 1/1/2018.
- Adjustment of the minimum deducted consumption amount, with effect from 1/1/2019.

Figure (22)



As a result of EMRC procedures and through tariff amendment, the losses of the National Electric Power Company fell from JOD 355 million to 110 million, a reduction of up to 69%. Figure (22) shows tariff revenue and reduction over the past four years.

Technical and non-technical electrical loss:

Setting thresholds for electrical losses of electricity distribution companies for the years 2018 and 2019 as follows:

Table (5)

Company	Loss Approved by EMRC
Jordanian Electric Power Co.	11.92%
Electricity Distribution Company	11.32%
Irbid Electricity Company	10.04%

EMRC obliged electricity distribution companies to comply with power loss reduction plan developed in early 2015, which aims to reduce the rate of loss in the distribution system by 10% compared to 2020.

Table (6)

Percentage of technical and non-technical power loss (%)						
Company	Power loss reduction	2015	2016	2017	2018	
Irbid Electricity Company	Actual	11.22	11.15	10.27	10.38	
	Target	10.63	11.11	11.11	10.04	
Electricity Distribution Company	Actual	12.45	11.88	11.88	11.88	
	Target	11.20	11.89	11.89	11.32	
Jordanian Electric Power	Actual	15.39	13.96	12.90	11.92	
Co.	Target	13.00	13.56	13.56	12.78	

Figure 23 shows the revenues deducted from electricity distribution companies for electricity tariff. In the past four years, EMRC was able to reduce electric power losses by deducting amounts to subsidize tariffs, if distribution companies do not reduce their respective losses. This has enhanced the efficiency and effectiveness of companies.

Revenue deducted from electricity distribution companies for electrical tariff

Figure (23)

EMRC binding procedures on electricity companies to develop plans to reduce technical and non-technical electric power losses led the electricity distribution companies to comply with the procedures and plans, which made these companies, achieve the losses targeted by the Commission. Therefore, no revenues were deducted from electricity distribution companies for electricity tariffs during 2017 and 2018.

Financial Control over Electricity Distribution Companies and National Electric Power Company

- Preparing RFP terms of reference for auditing the financial statements of electricity distribution companies for 2017.
- Preparing a financial analysis of the interim financial results for 2018 for all electricity distribution companies.
- Monitoring the debts of electricity distribution companies to government departments

Cost of electricity connection to the end consumer:

• Table (7) shows the cost of production, transmission and distribution of kilowatt per hour of electricity connected to the end consumer during 2018, which clearly shows that the cost amounted to 120 fils/kWh.

Table (7)
• Average cost of electricity connection to the end consumer 2018

Average cost of electricity connection to the end consumer 2018

Costs of generation and transmission sectors	(JOD)	(fils/kWh)	Weighted average	
Fuel Costs	1,011,506,1 99	61.7	52.6%	
Energy and capacity costs paid to the generation companies	537,464,292	32.8	27.9%	
Maintenance, operation, administration, and interest expenses	196,338,868	12.0	10.2%	
Other revenue	-42,025,313	-2.6	2.2	
Total	1,703,284,0 46	104	88.6%	
Electricity Distribution	(JOD)	(fils/kWh)	Weighted average	
Electricity Distribution Costs	219,848,921	13405195. 58	11.4%	
Total	1,923,132,9 67	2,9 13405299. 43 100.0%		
Quantity of power sold to end consumer (GWh)	16,400			
Cost of delivery of electricity to the end consumer	117 (fils/kWh)			

Renewable Energy

Sector

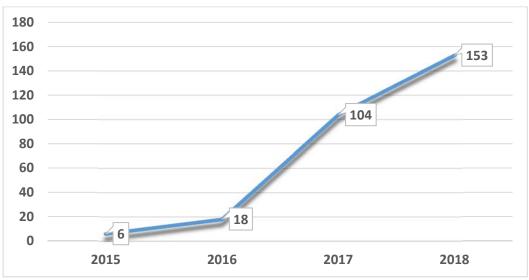
a. In the field of regulation

EMRC seeks to create and develop a legislative system for the renewable energy sector to attract investment in order to respond to the Economic Incentive Plan (2020-2018) and keep pace with the rapid technological developments in the sector. EMRC has played this role by imposing a package of legislation and procedures on the electricity companies to speed up the pace of implementation of renewable energy projects that belong to citizens and investors through net- metering and Wheeling approaches. This will enhance investment opportunities in this sector as a strategic option for the Kingdom to attain energy security and open the way for more job opportunities. EMRC has accomplished many achievements in this sector as follows:

- Issuing an amended Guide of the Guide for linking renewable energy sources using the
 transit system to include the case where subscribers desire to connect to the national
 electricity grid through the National Electric Power Company and consume through the
 distribution companies.
- Amending the conditions of transfer between the three levels of licensees set out in the Licensing Instructions of Persons Engaged in the Design, Supply, Installation, Operation, Maintenance and Inspection of Renewable Energy Sources Systems by canceling the requirement of 1-year experience.
- Issuing amended instructions of electricity transit costs to determine the date of application of transit costs and the percentage of electrical power losses set out in the instructions in force at the date of signing of the relevant agreements.
- Subjecting renewable energy applications under Zero Feed In system to the technical requirements, parameters and procedures set out in the Guide, similar to any renewable energy project.
- Exemption of renewable energy projects of the schools of the Ministry of Education from the charges of linking renewable energy sources systems.
- Adopting the proposed wording of the Standard Agreement for Telecommunication Companies for the purpose of linkage and transit of renewable energy sources using the transit system.
- Adopting the model agreement for linkage and transit of renewable energy sources systems through the transit system, which will be applied to the agreement to be signed between the National Electric Power Company and Dimensions Digital Building and Development of Data Company.

Figure 24 shows the regulatory documents and interpretations that were prepared or issued for the renewable energy sector by the end of 2018.

Figure (24)

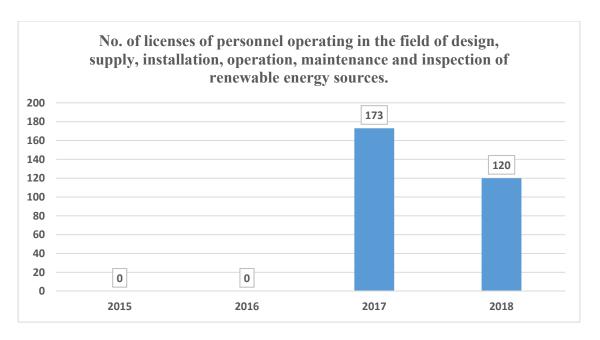


Finalization of legislation, policies, documents and organizational decisions mentioned above has contributed to 100% completion of these projects and programs in accordance with EMRC Strategic Plan 2018.

Permits and Licenses

- Issuing 19 licenses to generate electricity from renewable energy sources.
- Issuing 123 licenses for supply, operation, maintenance and inspection of renewable energy sources systems. 42 companies obtained level (A) licenses, which qualify them to carry out the activities of supply, installation, operation, maintenance and inspection of renewable energy sources systems. 16 companies have obtained second level (b) licenses, and 65 companies obtained third level (c) licenses.
 - Figure (25) shows a comparison of licenses and permits granted to the Renewable Energy Sector for the years 2015-2018. These activities were not organized before 2017.

Figure (25)



A. In the field of Monitor:

• EMRC intensified the supervision and inspection of the companies of electricity generation from renewable energy sources totaling 14 companies, including 6 wind power generation companies, with a capacity of 423.55 MW during 90 tours carried out in 2018.

Figure (26) below shows a comparison of the inspections carried out to institutions operating in the energy sector for the period 2015-2018.

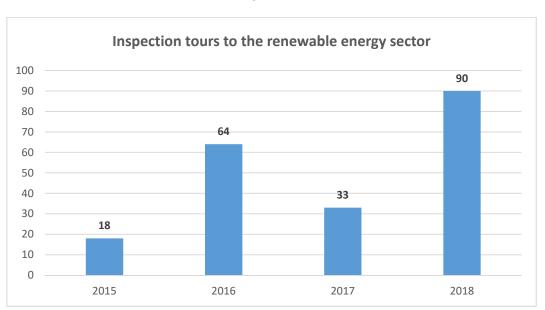


Figure (26)

 Verifying the performance of the electricity distribution companies in handling renewable energy applications and dealing with any case once ascertained. A specialized team of engineers, on a monthly basis, and when necessary, conducts field inspections of electricity distribution companies to verify the process of accepting applications for linkage of renewable energy systems according to the approved legislation.

Figure 27 shows the cumulative number of renewable energy systems linked to the net measurement system and its capacity up to the end of 2018.

Figure (27)

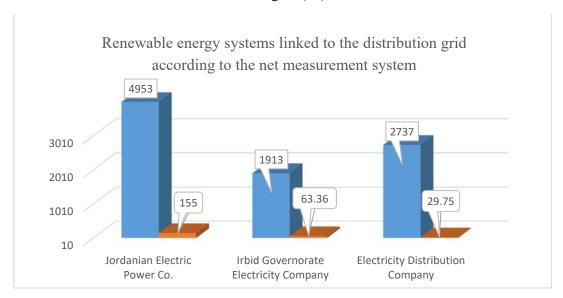
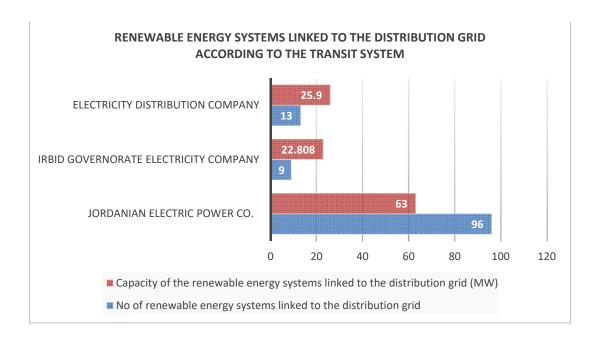


Figure 28 shows the cumulative capacity and number of transit systems linked to the distribution grid up to the end of 2018.

Figure (28)



Natural Resources

Sector

A. In the regulation field

- Enacting the Natural Resources Law No. 19 of 2018.
- Adopting the draft financial guarantee system for the rehabilitation of mineral lands according to the provisions of Articles (22 / a / 3) and (38) of the Natural Resources Law No. (19) of 2018 and submitting it to the Prime Ministry to be presented to the Council of Ministers for its duly approval and publication in the official gazette.
- Adopting the draft Quarry Regulation based on the Natural Resources Law No. 19 of 2018 and submitting it to the Prime Ministry to be presented to the Council of Ministers for its duly publication in the official gazette.
- Adopting the draft Mining and Quarry Fees Regulation based on the Natural Resources Law No. 19 of 2018 and submitting it to the Prime Ministry to be presented to the Council of Ministers for its duly approval and publication in the official gazette.
- Issuing instructions to grant a temporary permit for the purposes of exploiting the stone materials in the implementation of the construction projects, according to the provisions of Articles (18) and (37) of the Natural Resources Law No. (19) of 2018, with effect from 20/12/2018.
- Issuing instructions to grant a temporary permit for the purposes of land reclamation in Ajloun area and similar areas and the extraction and sale of stone, according to the provisions of Article (37) of the Natural Resources Law No. (19) of 2018, with effect from 20/12/2018.
- Adopting the terms of reference related to exploratory studies in Lisan Area/Dead Sea.
- Adopting the standard mining license.
- Drafting a standard license for extraction, exploration, development and operation to exploit oil shale.
- Drafting the standard license for extraction, exploration, development and operation of petroleum production.
- Amending the basis for the accreditation of the offices concerned with the provision of advisory services for the purpose of obtaining a mining right.
- Canceling (7) mining rights due to non-operation since the date of granting them.
- Developing a plan to correct the reality of mining rights granted in accordance with the legislation in force.
- Extending license for exploration of copper, manganese and associated minerals in Dana Reserve of Jordan Integrated Mining and Exploration Company until February 14, 2019.

Finalization of legislation, policies, documents and organizational decisions mentioned above has contributed to 100% completion of these projects and programs in accordance with EMRC Strategic Plan 2018.

a. Permits and Licenses

- Issuing (2147) export licenses for several mineral ores, exported to more than (39) countries.
- Issuing (235) quarry licenses.
- Issuing (23) mine bomber licenses.
- Issuing (5) exploration licenses.
- Issuing (4) mining licenses.

Figure (29) shows a comparison of the number of mining licenses and permits for 2015-2018

Figure (29)

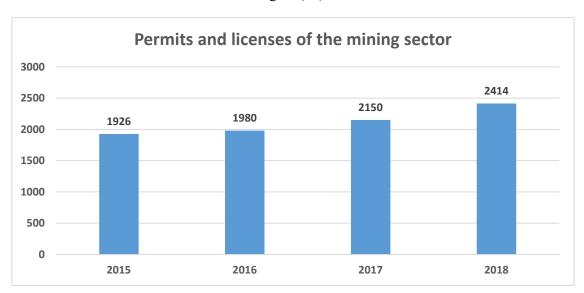


Table (8) shows the quantity of mineral ores exported during 2015-2018.

Table (8)

Exported Mineral Ores (ton)						
Raw Material	2015	2016	2017	2018		
Phosphate	8,300,000	0	0	0		
Construction stone	341,693	348588	333038	276,480.12		
Marble	9,056	6166	19425	3,739.20		
Volcanic Tuff	15,910	21770	444049	30,041.00		
Dead Sea Mud	115	116	203	159.11		
Calcium carbonate	411,751	442467	335472	396,807.00		
Natural Sand	233,515	522765	771958	688,403.00		
Dead Sea salts	2,962	1211	1048	1,266.45		
Travertine	4,526	2645	2623	1,209.10		
Gypsum	30	0	0	500.00		
Granite (blocks)	2,929	1589	3773	5,464.50		
Clay	581	830	2840	3,396.00		
Silica sand	5,233	9899	22758	4,326.00		
Basalt	0	5009	13684	36,521.50		
Food Salt	20	3707	2359	5,126.50		

B. In the field of control:

- Conducting 916 inspection and control tours to mines and quarries in all governorates of the Kingdom. The outcomes of these visits are as follows:
 - Issuing 30 violation records for violating quarry owners:
 - Issuing 211 decisions to close violating quarries.
 - Notifying 114 licensed quarries to correct the violations.
 - Collecting and analyzing (185) sand and debris samples to control product quality.
- Developing the phosphate ore inventory report for Q4 2017, reconciling the inventory reports for Q3 and Q4 of 2017, and issuing Q1, Q2, and Q3 reports of phosphate ore inventory for 2018.
- Reconciling the exported quantities of Dead Sea mud & salts, in accordance with the export licenses issued by EMRC, with the quantities sold through Numeira Mixed Salts & Mud Company for 2017.
- Conducting 12 inspection tours to electricity generation from the direct burning of oil shale project at Atarat Energy Company.
- Conducting 12 inspection tours to the license area for the exploration of copper, Manganese, and associated minerals in Dana resort.
- Verifying the production cost of bromine ore and calculating revenues due to the State treasury for 2017.

Figure (30) shows the total irregularities of mining sector institutions for the period 2015-2018.



Table (9) shows the number of licensed quarries and their types distributed to the governorates of the Kingdom for 2018

Table (9)

Licensed quarries by type and governorate during 2018									
Governorate	Debris	Spreading	Construction stone	Natural Sand	Debris and torrent sand	Marble	Marble blocks	Industrial	Total
Capital	26	9		10		1			46
Balqa	14			4	3				21
Zarqa	18	5	2	4		7	10	2	48
Madaba	5								5
Irbid	20								20
Mafraq	11	3	17				1		32
Ajloun			18						18
Jerash	2			1					3
Karak	13			1	1				15
Tafileh	4		1						5
Maan	3		10						13
Aqaba	2				4				6
Total	118	17	48	20	8	8	11	2	



Petroleum Products

Sector

a. In the field of regulation

EMRC started to exercise its functions by regulating petroleum, petroleum products, and natural gas sector under the Energy and Minerals Sector Regulatory Commission Law No. 11 of 2018.

- Adopting a standard license for the storage and handling of crude oil and oil derivatives.
- Developing the draft licensing regulation for activities related to the petroleum derivatives sector, based on the Petroleum Derivatives Law No. (11) of 2018, and submitting it to the Council of Ministers for its duly approval.
- Issuing amended instructions to regulate the activities of LPG cylinder sector (transport, storage and distribution of LPG cylinders)
- Developing an emergency plan for the supply of petroleum products in accordance with Article (24) of paragraph (a) of Petroleum Derivatives Law No. (11) of 2018.
- Obligating any investor who wishes to build a fuel station to build an electric charging station when granting a construction permit for the plant.
- Approving the yellow stamping seal for the packaged cylinders for the northern and central valleys, Al-Azraq, and the white color for the cylinders packed in the southern valleys.
- For the purpose of moving from setting the prices of petroleum products to determining the maximum price of petroleum products and the commissions and tariffs of the licensee, EMRC reviewed the development of the sector in accordance with the program of restructuring the oil sector and opening it to competition included in the comprehensive strategy for the energy sector (2008-2020) and the resulting executive plans prior to 1/7/2018. EMRC prepared a report in this regard, concluding that the sector has become developed for the purposes mentioned above. The report was submitted to the Ministry of Energy and Mineral Resources to complete the procedure in accordance with the provisions of the applicable Petroleum Products Law.
- Obligating the marketing companies and Jordan Petroleum Refinery Company to provide the Kingdom of Saudi Arabia with 90 and 95 gasoline requirements, in accordance with the law and licenses granted to the marketing companies and the technical specifications/rules in force, according to Jordan Institution for Standards and Metrology Law, during the period in which gasoline was traded with iron and manganese content that is not included in the standard.
- Reaching understandings that set the future of the work of Jordan Petroleum Refinery Company after 1/5/2018, which resulted in the issuance of a decision of the Council of Ministers to adopt these understandings and enable the marketing companies of oil products to import their full needs of oil products, without any obligation to secure their need of the Refinery products, as well as government understandings with the Refinery regarding the Refinery's indebtedness owed from government institutions and the strategic stock of the government.

Finalization of legislation, documents and organizational decisions mentioned above has contributed to 100% completion of these projects and programs in accordance with EMRC Strategic Plan 2018.

Permits and Licenses

In 2018, EMRC completed 1753 transactions related to petroleum and petroleum products. The transactions are distributed as follows:

- 501 fuel stations
- 477 liquidated petroleum gas
- 188 gas cylinders distribution centers
- 176 gas cylinders warehouses
- 12 asphalt and coal import.
- 8 industrial fuel licenses.
- 391 miscellaneous

Figure 31 below shows a comparison of the number of licenses and permits issued in the petroleum derivatives sector for the period 2015-2018

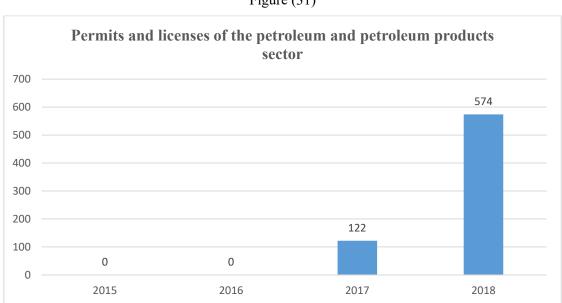


Figure (31)

b. In the field of control:

- Daily control of crude oil and oil products inventory in the oil facilities of the licensees
- Conducting (559) field tours for control, inspection and detection of several existing and proposed gas stations, centers, warehouses and agencies, distributed as follows:
 - 336 inspection tours to fuel stations.
 - 124 inspection tours to gas warehouses.
 - 91 inspection tours to gas agencies.
 - 8 inspection tours to industrial fuel plants.

Figure 32 below shows the comparison of inspection tours carried out to petroleum products sector during the period (2017-2018).

Figure (32)

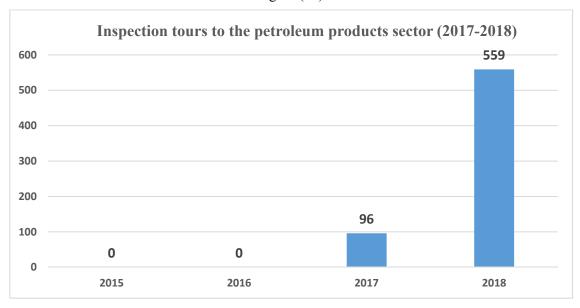


Table (10) shows the number of establishments operating in the petroleum products sector

Table (10)

Year	Fuel stations	Gas cylinders warehouses	Gas agencies	Central Gas Distribution Companies
2018	604	123	624	6
2017	547	131	890	7
2016	518	126	1176	6
2015	496	127	1112	6

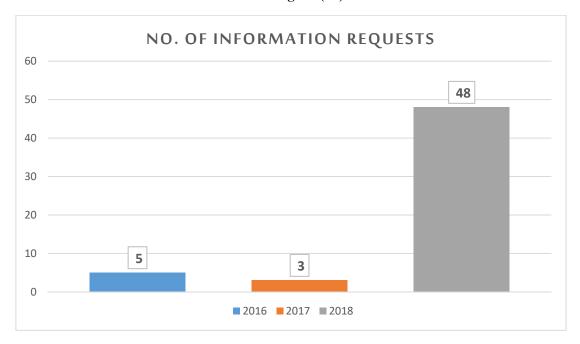


Corporate Performance Development

First: National Information System of the Sector

- Pursuant to Articles 4/b/6 and 17/a of EMRC Law No. (8) of 2017, a national information system for the sector was created. The system includes an integrated central database based on the use of modern information technologies. It includes the activities of the sector, the basic market, statistics of the sector operation in the Kingdom, and global references to be used as a strategic planning tool for the Government and the stakeholders and to inform the public periodically of the status of the sector.
- A national registry was created for the sector, which is an integral part of the national
 information system of the sector. Applications, permits and licenses issued by EMRC will
 be entered in this registry, in addition to any change to, suspension or cancellation of these
 permits and licenses, or any information related to the licensees, the transactions carried
 out by the licensee and the facilities that belong to licensees.
- Preparing daily reports on the adequacy of the Kingdom's inventory per day of crude oil, its products, and liquefied natural gas, which is used for the purpose of producing electricity at generation stations distributed across the Kingdom.
- Preparing daily reports on the rates of participation of different sources of generation in the electric load and identifying the contribution of each generation plant in the amount of produced electricity.
- Updating the database of quarries and mines after entering the spatial and cadastral data of quarries.
- Promoting the principles of transparency, ensuring the right to access to information by preparing lists of applications filed to the Commission, publishing them on a monthly basis on the website, classification of all confidential and classified documents and information available at the Commission based on the provisions of Access to Information Law and Protection of State Secrets Law. Providing the service of filing applications through various channels, as customers can apply for information on paper through the Public Service Office or electronically through EMRC website, and automating full access to information service, since the time of filing the application until response. An email is sent to the applicant to respond to the application. The request for information via email service is promoted through "My Government at my Service" account.
- The number of applications for information submitted to the Commission in 2018 amounted to (48) applications, including (42) paper applications and 6 online applications.
- The rate of satisfaction of service recipients with response to information requests amounted to (78.2%) in 2018. Figure 33 below shows the number of applications for information filed to the Commission for the period (2016-2018).

Figure (33)



Second: Customer Service Center





The Customer Service Center receives customers on a daily and ongoing basis through the counters dedicated in the Center. All transactions are handled professionally and smoothly. The counters of the Center cover the following sectors:

- Electricity and renewable energy
- Radiation prevention
- Natural resources
- Petroleum Products Sector
- Laboratories

Figure (34) indicates total complaints and transactions handled by the Public Service Center in 2018, amounting to 9962 complaints and transactions.

Total number of complaints and transactions received by the Customer Service Center

Petroleum products and natural gas

1753

Electricity and renewable energy

Online platform

Radiation protection

Sample examination

54

Figure (34)

Third: Monitoring and Emergency Unit

EMRC Monitoring and Emergency Unit continued to monitor the border crossing points, on a daily basis, for radiation control, emergency rooms, call centers of the sector licensees, field teams and inspection campaigns. Emergency (maximum and usual) conditions were announced 4 times due to weather conditions, and during national festivals and occasions to ensure the security of energy supply, in coordination and cooperation with the competent authorities of the sector.

Fourth: Media and awareness campaigns

74 awareness campaigns were organized in the field of the sector in 2018, including 11 campaigns in the field of radiation and nuclear work, 23 campaigns in the electricity and renewable energy sectors, 23 campaigns in the natural resources sector, and 17 campaigns in petroleum products sector. Figure 35 shows the most prominent achievements in the communication and awareness campaigns field:

sector

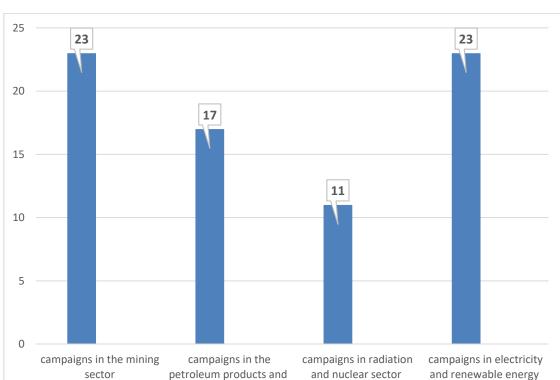


Figure (35)

Fifth: Human Resources

- Drafting EMRC Administrative Organization Regulation, which was issued on 21/5/2018
- Adopting Self-Assessment Report on Governance Practices.

natural gas sector

- Adopting 2018 Leadership Charter.
- Adopting 2018 Excellence Charter
- Adopting the Code of Conduct of EMRC Inspectors.
- Holding an awareness workshop for the participating institutions for the first time in cooperation with King Abdullah Center for Excellence.

EMRC staff participated in (537) internal and external courses, conferences, meetings, and workshops as follows:

- (133) external participation, involving (74) employees
- (404) internal participation, involving (209) employees.

57 trainees were trained at EMRC as follows:

- (10) geologists in cooperation with the Geologists Association.
- (20) engineers in cooperation with the Ministry of Public Works and Housing and the Engineers Association.
- (27) students from various universities.

Sixth: Information Technology

- Developing the following electronic systems:
 - o Vehicle data storage and processing system.
 - o A system for generating shift reports at the Control and Emergency Unit.
- Publishing 6 new services on the Commission's website, thereby increasing the number to (20) services.

Figure (36) shows the number of e-services for the period 2015-2018.

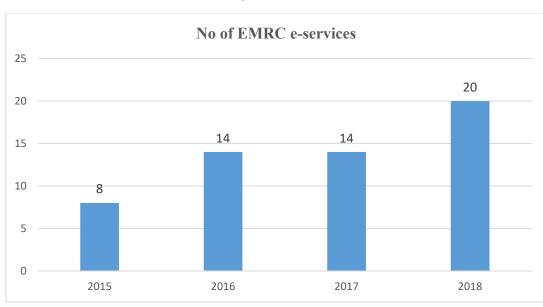


Figure (36)

- Activating the correspondence system (the system of correspondence between the Ministries of Ministries and Governmental Institutions) in the Commission.
- Developing the online payment program (efawateercom).
- Developing IT emergency plan at the Commission.
- Activating automatic receipt by the border centers, so that the documents are automatically entered and forwarded to the Commission's accounts.
- Obtaining the approval of the Ministry of Public Sector Development on procedures reengineering documents within Phase (A).
- Updating the explicit knowledge assets of the Commission for 2017 and publishing them on the intranet.
- Mobilizing the smart app "Calculate your bill" for mobile devices on both IOS + Android systems.

Seventh: Quality Management

- EMRC obtained the ISO 9001 certificate after completing the necessary requirements.
- Reviewing and developing operations management approach, reviewing and developing
 the operations manual operations and developing all EMRC processes and methodologies
 in cooperation with the various organizational units
- Handling 205 complaints through the eGovernment portal with a closure rate of 100% and within the required response time.
- Completing the project for coding and controlling documents and forms.
- Developing a business plan for the information security system ISO 27001
- Developing self-evaluation of governance practices for the three principles of governance (rule of law, efficiency, effectiveness) and submitting it to the Minister of State for Corporate Performance Development.

Eighth: Excellence and Creativity:

In order to foster the culture of excellence at the Commission and to motivate the staff, the foundations of creativity and innovation have been established. A committee has been set up to this end and employees were educated about the concepts of excellence. The principles and criteria for EMRC outstanding employees were established.

As a result of the actions that have been taken, the Commission and its staff acclaimed a number of awards of excellence at the local and international levels as follows:

Outstanding Government Employee Award:

• Mr. Rasheed Safia, Supporting Technical Officer Category.



Ideal Civil Servant Award:

- Mr. Salah Khaza'aleh.
- Mr. Hassan Kanakrieh.





- 100 Top Women in the World in Science, Technology and Engineering.
- Eng. Amal Khatatbeh



Ninth: Community Responsibility



An event was organized on the occasion of Tree Day on 17/3/2018 with the participation of EMRC staff in the cultivation of forest trees in Ajloun governorate. 150 seedlings were planted on a plot of the Ministry of Agriculture.



EMRC organized many charity bazaars to support poor families.



On the occasion of Mother's Day and over the course of two days (20-21/3/2018),campaign awareness was launched with the participation of employees of the Commission targeting the local (housewives community category) for the purpose of raising awareness in the field of electric energy and methods of rationalization and in the field of radiation protection.



Celebrating the occasion of Mother's Day in honor of the female employees of the Commission on 21/3/2018.



Celebrating religious and national events (New Year, New Hijri Year, Al-Karama Day)



Organizing workshops in cooperation with the Youth Council of the Commission (Enhancing our excellence through the youth initiative). Seminars were held, including meetings between organizational units and teams formed according to the themes of the Youth Council.







In recognition of the corporate role of the Commission after qualitative four years of achievement, workshops and seminars were organized for students in coordination with the governmental institutions with effective historical depth of influence in the march of the State of Jordan at different levels. including Salt Secondary School and the Ministry of Education.

A workshop was held on Launching 30/4/2018 to celebrate the achievements of the Commission over four years and looking ahead the future through the outlooks of EMRC staff. The workshop included several sketches, such as a presentation of the main achievements of the Commission during these four years. The event was attended by EMRC staff.

Launching a charity campaign to distribute packages to poor families in the month of Ramadan on 27/5/2018.







Launching an initiative targeting the elderly under the name of "Our elderly our blessing (2)" for the guests of Samir Shama Nursery Home on 5/6/2018.

Launching Eid Dresses Initiative on 11/6/2018, which included (30) orphans from Dam Al-Ghazalat/Salt in cooperation with Ahbab Allah Quran Center.

Visiting the young man Mohammad Qandil on 11/6/2018, to check on his health condition.

Energy & Minerals Regulatory Commission Amman, the Hashemite Kingdom of Jordan

FINANCIAL STATEMENTS AND INDEPENDENT AUDITORS' REPORT FOR THE YEAR ENDED DECEMBER 31, 2018

Energy & Minerals Regulatory Commission Amman, the Hashemite Kingdom of Jordan

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Independent Auditor's Report

Messrs. Chairman and Members of the Board of Commissioners of the Energy and Minerals Regulatory Commission

Amman, the Hashemite Kingdom of Jordan

Opinion

We have audited the accompanying financial statements of (Energy and Minerals Regulatory Commission), which comprise statement of financial position as at December 31, 2018, statement of comprehensive income, statement of changes in shareholders' equity and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory notes.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the (Energy and Minerals Regulatory Commission) as on December 31, 2018, its financial position, and its cash flows for the year then ended, in conformity with the International Financial Reporting Standards.

Basis of Opinion

We have audited the accompanying financial statements in accordance with international auditing standards. Our responsibility insofar as these standards is shown subsequently in our report in the paragraph of the responsibility of the Auditor for auditing the Financial Statements. We are independent of the Commission in conformity with the ethical requirements related to the process of auditing the Financial Statements, in addition to our adherence to other ethical responsibilities, as per the abovementioned requirements.

We believe that the data used in the audit which we obtained are adequate and suitable as a basis for our opinion in respect of the audit.

<u>Management's Responsibility and Officers Responsible for Governance of the Financial</u> Statements

Management is responsible for the preparation and fair presentation of these Financial Statements in accordance with International Financial Reporting Standards and is likewise responsible for preparing an internal control system which the management considers necessary for purposes of preparing the Financial Statements that are free from material misstatement, whether due to fraud or error

Management is responsible upon preparing the Financial Statements for assessing the capability of the Commission to continue and disclose, as applicable, the matters related to continuity and the use of the ongoing concern accounting principle, except the presence of an intention on the part of the management to liquidate the Commission or to cease its activities or if there is no realistic alternative.

The persons responsible for governance are themselves responsible for overseeing the procedures of financial reports for the Commission.

Explanatory Clause

Pursuant to the Decision of the Council of Ministers No. 1534 dated 15/10/2018 and No. 1656 dated 22/10/2018, EMRC budget was transferred from the Government Units Budgets to the Public Budget Law.

Auditor's Responsibility for the Audit of Financial Statements

Our objective is to obtain reasonable assurance as to whether the Financial Statements as a whole are free from any material misstatement, whether due to fraud or error, and to issue our report containing our opinion in this regard.

Reasonable assurance is a high level of assurance, but it is not a guarantee that the audit performed in accordance with international auditing standards will always uncover any material misstatement.

The errors could arise from fraud or error, and are considered substantive in case they, individually or in general, may reasonably affect the economic decisions taken by the users on the basis of these Financial Statements.

As a part of the audit process in accordance with international auditing standards, we exert professional efforts and comply with the principle of professional scrutiny during the audit, in addition to the following:

- Determine and assess the risks of substantive errors in the Financial Statements, whether arising from fraud or error, and also design and implement the auditing procedures that are responsive to those risks, and obtain adequate and suitable auditing evidence to constitute a basis for our opinion. The risk of not uncovering material misstatements resulting from fraud is greater than the risk resulting from error, where fraud could include collision or forgery or willful preclusion or misrepresentation or an infringement of the internal control systems.
- Acquire an understanding of the internal control systems related to auditing for purposes of designing suitable auditing procedures according to circumstance, rather than for the purpose of expressing an opinion on the efficiency of the internal control systems in the Commission.

- Evaluate the suitability of the adopted accounting policies and the extent of the reasonableness of the accounting estimates and the relevant explanatory notes prepared by management.
- Reach a conclusion concerning the suitability of the management's use of the ongoing concern accounting principle, based on the audit evidence obtained, insofar as whether there is a lack of certain belief related to events or circumstances which could raise substantive doubt concerning the ability of the Commission to continue. In case we deduce the absence of certain belief, we are required to point out this fact in the audit report to the relevant explanatory notes in the Financial Statements, and in case disclosure of such information is inappropriate, we shall then alter our opinion. Our conclusions depend on the auditing evidence, which was obtained until the date of the Audit Report. Nevertheless, it would be possible for future events or circumstances to prevent the Commission from continuing to exist.
- Evaluate the general presentation and the form and content of the Financial Statements including disclosures, and whether the Financial Statements represent the transactions and events in a fair and balanced manner.

Communicate with those responsible for governance insofar as the scope and timing of the planned auditing and the significant auditing remarks, including any significant deficiencies in the internal control system which were identified in our audit.

Report on the Other Legal and Legislative Requirements

The Commission maintains organized and proper accounting records, which are consistent in all substantive aspects with the attached Financial Statements.

By the Certified Auditors

Jamal Hamoudeh (JCPA, ACPA) License Number 478

Amman on February 4, 2019

Energy & Minerals Regulatory Commission Amman, the Hashemite Kingdom of Jordan

Statement - A

	Notes	2018	2017
		JOD	JOD
Assets			
Current Assets			
Cash and Cash Equivalents	3	763,333	861,351
Accounts Receivable	4	2,259,020	954,922
Total Current Assets		3,022,353	1,816,273
Non-Current Assets			
Lands		2,944,000	2,944,000
Property, Machinery and Equipment	5	6,913,149	7,728,131
Net Other Assets	6	1	1
Гotal Non – Current Assets		9,857,150	10,672,132
Total Assets		12,879,503	12,488,405
Liabilities & Shareholder's Equity			
Current Liabilities			
Accounts Payable	7	512,981	718,105
Other Accounts Payable	8	153,642	69,908
Total Current Liabilities		666,623	788,013
Shareholder's Equity			
Surplus of Revaluation of Fixed Assets	9	2,967,630	2,967,630
Deferred Income on Grant of Assets	10	5,815,637	6,348,449
Accumulated Surplus	11	3,429,613	2,384,313
–Statement C		12,212,880	11,700,392
Total Liabilities & Shareholder's		12.879.503	12,488,405

THE ATTACHED EXPLANATORY NOTES CONSTITUTE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS

Equity

12,879,503

12,488,405

Energy & Minerals Regulatory Commission Amman, the Hashemite Kingdom of Jordan

Statement (b)

Statement of comprehensive income for the year ended December 31, 2018

	Notes	2018	2017
		JOD	JOD
Revenues			
Revenues of License Fees for Electricity Sector	12	5,626,853	5,474,917
Revenues of natural resources fee	13	6,127,407	7,545,148
Revenues of Radiation and Nuclear Activity License Fees	14	2,649,206	1,856,536
Revenues of Bank Interest		894	16,404
Other revenue		18,312	64,114
Amortization of deferred revenue for assets		1,335,490	1,335,490
Revenues of oil and oil products	15	603,925	306,068
Total Revenue		16,362,087	16,598,677
Expenses			
Salaries and Wages and Other Benefits	16	(3,630,041)	(3,534,683)
General and Administrative Expenses	17	(484,900)	(501,267)
Capital Expenditures	18	(622,901)	(657,414)
Studies and Consultation		(80,622)	(154,063)
Depreciation and Amortization		(1,714,376)	(1,523,372)
Devaluation of Obsolete Accounts Receivable		(200,000)	(208,476)
Previous Years Revenues (Expenses)	19	(351,868)	(81,960)
Total Expenses		(7,084,708)	(6,661,235)
Year Surplus – Statement C		9,277,379	9,937,442

THE ATTACHED EXPLANATORY NOTES CONSTITUTE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS

Energy & Minerals Regulatory Commission Amman, the Hashemite Kingdom of Jordan

Statement C

Statement of Changes in Shareholders' Equity for the Year Ended December 31, 2018

	Total	Accumulated Surplus
	JOD	JOD
Balance as of January 01, 2017	13,275,633	13,275,633
Amount transferred to the public treasury	(11,300,000)	(11,300,000)
Deferred Income on Assets	1,122,807	1,122,807
Deferred Revenue Amortization	(1,335,490)	(1,335,490)
Year surplus - Statement B	9,937,442	9,937,442
Balance as of December 31, 2017	11,700,392	11,700,392
Amount transferred to the public treasury	(8,232,079)	(8,232,079)
Deferred Income on Assets	802,678	802,678
Deferred Revenue Amortization	(1,335,490)	(1,335,490)
Year surplus - Statement B	9,277,379	9,277,379
Balance as of December 31, 2018 Statement A	12,212,880	12,212,880

THE ATTACHED EXPLANATORY NOTES CONSTITUTE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS

	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES	JOD	JOD
Year Surplus	9,277,379	9,937,442
Depreciation and amortization	1,714,376	1,523,372
Operating surplus before change in working capital items	10,991,755	11,460,814
Change in current assets and liabilities		
Accounts Receivable	(1,304,098)	880,753
Accounts Payable	(205,124)	(59,937)
Other Accounts Payable	83,734	(250,533)
Net cash flow from operating activities	9,566,267	12,031,097
CASH FLOWS FROM INVESTMENT ACTIVITES Property and equipment	(899,394)	(1,312,972)
Net cash from investing activities	(899,394)	(1,312,972)
CASH FLOWS FROM FINANCE ACTIVITES Amount transferred to the public treasury	(8,232,079)	(11,300,000)
Deferred grants	(532,812)	(212,683)
NET CASH FLOWS FROM FINANCE ACTIVITES	(8,764,891)	(11,512,683)
Net cash flows from activities	(98,018)	(794,558)
Cash and cash equivalents – beginning of the year	861,351	1,655,909
Cash and cash equivalents – end of the year	763,333	861,351

Energy & Minerals Regulatory Commission Amman, the Hashemite Kingdom of Jordan

Statement (D)

STATEMENT OF CASH FLOWS FOR THE YEAR ENDED DECEMBER 31, 2018

THE ATTACHED EXPLANATORY NOTES CONSTITUTE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS

Energy & Minerals Regulatory Commission Amman, the Hashemite Kingdom of Jordan

Notes to the financial statements

1. <u>Legal Status and Activities</u> About the Commission

Energy and Electricity Regulatory Commission is a government organization established under the Law of Restructuring Governmental Institutions and Departments No. (17) of 2014. It has a legal personality with financial and administrative independence. In this capacity, it may acquire movable property required to achieve its objectives and to carry out all legal actions. It is the legal successor of the Electricity Sector Regulatory Commission, Radiation and Nuclear Regulatory Commission and the Natural Resources Authority in respect of the administrative tasks designated to the Commission. The Commission is represented by the Chairman of the Board of Commissioners/CEO before all other bodies. It comprises the Board of Commissioners and the Executive Body. In April 2017, the Energy and Minerals Sector Regulation Law No. 8 of 2017 was enacted, which organized the work of the Commission and identified its objectives and the functions and powers of the Board of Commissioners and Chief Executive Officer.

- General Electricity Law No. 64 of 2002, as amended.
- Radiation Protection and Nuclear Safety and Security Law No. 43 of 2007, as amended
- Renewable Energy and Energy Conservation Law No. 13 of 2012, as amended
- Petroleum Products Law No. 11 of 2018.
- Petroleum Derivatives Law No. 19 of 2018.

<u>Strategic, Sectoral, and National Objectives to which EMRC Contributes:</u> <u>National objectives to which EMRC contributes:</u>

- 1. Maintain financial and monetary stability, control the budget deficit, and develop an efficient and low-risk financial system.
- 2. Create an attractive investment environment capable of attracting foreign capital and encourage local investment.
- 3. Improve the level of services provided to citizens and the fairness of their distribution.

Sectoral objectives to which EMRC directly contributes:

- 1. Regulate the sector on the basis of balance between the interests of consumers, investors, licensees, any other stakeholders.
- 2. Maintain the interests of consumers provided that they comply with the conditions of providing the services approved by EMRC, which are provided by the licensees.

- 3. Maintain an efficient environment for the sector, which will enhance the economic feasibility of the sector and improve its efficiency.
- 4. Ensure the provision of secure, stable, durable and high- quality services in the sector.
- 5. Ensure the provision of public safety conditions and requirements and protect the environment and people health and property.
- 6. Ensure that the services required from licensees are provided to consumers sufficiently and with high quality.

There are other sectoral objectives set out in the legislation related to the work of the energy and mineral sector, which EMRC is seeking to achieve, including the objectives set out in the Comprehensive Energy Sector Strategy.

- 1. Regulate the energy and minerals sector on the basis of balance between the interests of consumers, investors and any other stakeholders.
- 2. Develop an effective control and inspection system for the sector to improve and enhance the confidence of consumers and investors and achieve competitiveness and protect human and environment.
- 3. Develop cost-based pricing systems and methodologies to ensure improved performance and lowest costs.
- 4. Enhance EMRC efficiency and effectiveness.

EMRC Financial Resources:

EMRC financial resources consist of the following: The amounts allocated to it in the state budget.

- 1. Revenues derived from license and permit fees and their renewal.
- 2. Remuneration for services provided by the Commission.
- 3. Aid, grants, and donations, if approved by the Council of Ministers, if they are of a non-Jordanian source.
- 4. Proceeds of fines imposed by the Commission under the legislation relevant to the sector regulation.

Annual Surplus

The annual surpluses accruing to the Commission, after deducting all expenses, devolve to the Public Treasury.

Exemptions

- The Commission avails of all the exemptions and facilities enjoyed by ministries and government departments.
- The Commission funds and its entitlements are considered Public Funds and are collected in conformity with the rulings of the Public Property Law in force, and for this purpose, the Chairman exercises the powers assigned to the district governor or the Committee for Collection of Public Property stipulated in that law.

Number of Employees

- The numbers of employees of the Commission by the end of the year 2018 were (356), 3 seconded employees, 4 suspended employees, 1 employees assigned to a government entity, and 46 employees on unpaid leaves.

Approval of the Financial Statements

- The Financial Statements were approved by the Board of Commissioners of the Commission in its session Number (33) convened on 25/2/2019.

2. SIGNIFICANT ACCOUNTING POLICIES

The attached Financial Statements are prepared in accordance with the International Financial Reporting Standards, and the following is a summary of the significant policies applied:

a. Basis of measurement

The financial statements are prepared according to the historical cost principle. This principle has been amended for certain assets as indicated below.

The Jordanian Dinar is the currency of the Financial Statements which represents the official currency of the Commission.

The Commission follows the accrual basis in recording its revenues and expenses for electricity, while other revenues are recorded on a cash basis.

b. Property, machinery and equipment

Property, machinery and equipment are recorded at cost, less accumulated depreciation and any impairment in value allowance. The Commission uses the straight-line method for depreciating its property, machinery and equipment, excluding lands, over estimated useful lives at the following percentages:

Buildings2%

Furniture and furnishing 10%

Vehicles 15%

Machinery and equipment 15%

If any of the property and equipment is disposed of, the net book value for the disposed asset on the date of disposition is omitted from the Commission's records, and the result, whether income or loss, is forwarded to the statement of income.

The major additions and improvements are capitalized at cost. As to maintenance and repair expenses they are charged to current transactions as they occur.

When the sum recoverable from any of the properties and equipment is less than their net book value, then its value is reduced to the recoverable value. Any impairment is entered in the comprehensive income statement.

The production life and method of depreciation are reviewed regularly to verify that the method and period of depreciation are consistent with the economic benefits anticipated from the properties and equipment.

c. Intangible Assets

The intangible assets are classified on the basis of estimating their presumed lifespan for a definite or indefinite period. The intangible assets which have a specific presumed life are amortized during this presumed age and the amortization is entered in the income statement.

As to the intangible assets with an indefinite lifespan, impairment in its value is reviewed as at the date of the financial statements and any decline in its value is entered in the income statement.

The intangible assets resulting from the activity of the Commission are not capitalized and are recorded in the comprehensive income statement in the same year.

Any indicators of a decline in the value of the intangible assets are reviewed as at the date of the Financial Statements. Any indicators of a decline in the value of the intangible assets are reviewed as at the date of the Financial Statements. Moreover, the estimate of the lifespan of those assets are reviewed and any amendments are done for the subsequent periods.

The intangible assets consist of computer programs, which are amortized by 15% annually.

d. Cash and cash equivalents

For the purpose of preparing the cash flow statement, "cash and cash equivalents" item represents cash in hand, current accounts and demand deposits with banks, which have value dates of three months or less.

e. Foreign currencies

Foreign currency transactions occurring during the year are expressed in Jordanian Dinars at the market prices prevailing on the transaction date. Assets and liabilities denominated in foreign currencies are expressed in Jordanian Dinars at rates of exchange prevailing at the end of the financial year. The differences stemming from change in the rates of exchange are entered in the income statement.

f. Provisions

Provisions are recognized when the Commission has obligations due at the date of statement of financial position from past events and the payment of obligations is possible and the amount of these obligations can be measured reliably.

g. Other payable balances and accounts

The liabilities in terms of payments that have fallen due in future are recorded for the received goods or services, whether claimed or not claimed by the supplier.

h. Accounts receivable

Accounts receivable and payable are recorded in the value of contracts or claims held by the Commission. The impairment provision of accounts receivable is made when it appears to the management that it is not possible to complete the collection of all these receivables. The provision is calculated based on the difference between the book value and recoverable amount.

i. Revenue recognition

The revenues from the sale of lands are recorded when the benefits and risks of ownership are transferred to the buyer and when the revenues can be reliably measured. The other revenues are recognized based on the accrual principle.

j. In-Kind and Cash Grants

The in-kind grants are entered as deferred revenues within the item of liabilities upon receiving them and afterward those contributions are recognized as a part of the revenues, such in a manner suitable for the uses of those properties and equipment. As to cash grants, they are recognized in the income statement.

k. Financial instruments

A financial instrument is any contract that gives rise to both a financial asset of one enterprise and a financial liability or equity instrument of another enterprise.

The Commission's financial instruments are principally comprised of cash, cash equivalents, bank balances, accounts receivable and payable.

l-Changes in Accounting Policies

The accounting policies used in the preparation of financial statements for the year are consistent with those followed in the preparation of financial statements for the previous year.

m. Use of Estimates

The preparation of financial statements and application of accounting policies requires the management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities. These estimates and judgments also affect the revenues, expenses and provisions, in particular requiring the management of the Commission to make significant judgments and assumptions to estimate the amount and times of future cash flows resulting from the conditions of times and circumstances of those estimates in the future. The estimates stated above are necessarily based on assumptions and myriad factors involving varying degrees of judgment and uncertainty. The actual results may differ from estimates as a result of future changes in the conditions and circumstances of such provisions.

3. Cash and Cash Equivalents

This item consists of the following:

	_010	_01.
	JOD	JOD
Central Bank	4,713	4,713
Jordan Bank	-	6,005
BLOM Bank	7,043	76,041
Cairo Amman Bank	751,577	767,595
Main Cash Box	-	6,997
Total	763,333	861,351

2018

2017

4. <u>Accounts Receivable</u> This item consists of the following:

	2018	2017
	JOD	JOD
Electricity Companies Receivables		
Jordanian Electric Power Co.	3,103,622	1,595,111
Total Electricity Companies Receivables	3,103,622	1,595,111
Receivables of renewable energy companies	-	4,803
Staff receivables	1,715	840
Receivables of Al-Mutahida Green Technology Company	3,393	3,393
Temporary and permanent advances	290	775
Total	3,109,020	1,604,922
Provision of Impairment for Accounts Receivable	(850,000)	(650,000)
Accounts Receivable after Provision	2,259,020	954,922

6. Net Other Assets

This item consists of the following:

2018	2017
JOD	JOD
485,441	485,441
(485,440)	(485,440)
1	1
	JOD 485,441

7. Accounts Payable
This item consists of the following:

Ç	2018	2017
	JOD	JOD
Electricity Companies Receivables	27,205	81,960
Payable suppliers	471,592	635,600
Staff receivables	76	244
Accounts payable of electricity generation from renewable energy companies	4,330	301
OTHER ACCOUNTS PAYABLE	9,778	
Total	512,981	718,105

8. OTHER ACCOUNTS PAYABLE

This item consists of the following:

	2018	2017
	JOD	JOD
Deposits of the judicial control	37,491	527
Outstanding cheques deposits	1,409	-
Staff deposits	1,962	5,275
Guarantee liquidation deposits	16,192	13,192
ADSTM Company	7,403	7,403
Deposits of border crossings maintenance	-	432
Deposits of the Ministry of Finance and Income Tax	40	23,017
Deposits of the electrical system development	100	1,000
Local and regional training deposits	17,138	16,607
Payment certifier deposits	1,591	2,455
Technology training, stimulation and transfer deposits	70,308	-
Deposits of Awraq Al-Sandyana Logistics Establishment	8	
Total	153,642	69,908

9. Surplus of Revaluation of Fixed Assets This item consists of the following:

	2018	2017
	JOD	JOD
Lands	2,192,200	2,192,200
Machines and Equipment	128,451	128,451
Furniture and furnishings	10,879	10,879
Vehicles	133,000	133,000
Buildings	503,100	503,100
Total	2,967,630	2,967,630

10. <u>Deferred Income on Grant of Assets</u> This item consists of the following:

	2018	2017
	JOD	JOD
Computers and equipment	10,520,288	9,717,823
Vehicles	276,037	276,037
Caravan	31,000	31,000
Furniture and furnishings	25,303	25,090
Total	10,852,628	10,049,950
Amortization of Deferred Income	(5,036,991)	(3,701,501)
Total	5,815,637	6,348,449

11. <u>Accumulated Surplus</u> This item consists of the following:

2018	2017

	JOD	JOD
Retained profit surplus	2,384,313	3,746,871
Year Surplus	9,277,379	9,937,442
Transfers to the Ministry of Finance	(8,232,079)	(11,300,000)
Total	3,429,613	2,384,313

12. Revenues of License Fees for Electricity Sector a. This item consists of the following:

	2010	2017
	JOD	JOD
Revenues of the license of the Central Electricity Generating Company (CEGCO)	335,712	415,551
Revenues of the License of the National Electric Power Company (NEPCO)	1,860,378	1,867,724
Revenues of the License of Electricity Distribution Company (EDCO)	318,005	320,889
Revenues of the License of Samra Electric Power Generation Co. (SEPGCO)	674,716	726,556
Revenues of the License of Irbid District Electricity Company (IDECO)	321,765	306,147
Revenues of the License of Amman East Power Plant Revenues of the License of Xenel- Kepco/ Qatran	238,175 279,573	356,759 279,130
Revenues of the License of Jordanian Electric Power Company (JEPCO)	1,067,179	925,788
Revenues of the License of Asia Company Revenues of the License of AES	29,550 95,776	-
Revenues of renewable energy license applications	295,966	182,583
Remuneration for services of supplying self-generated electrical energy	48,957	52,844
Revenues of discharge and approval of electric power meters	8,631	6,052
Revenues of Al-Badia Power General Company license	1,108	1,028
Revenues of Jordan Wind Renewable Energy License	16,287	16,725
Revenues of Shamsona Energy Company license	926	931
Revenues of Sun Addison Company license	2,536	2,550
Revenues of Sakatik Solar Company license	1,097	-
Revenues of Ard Al-Amal Power Generation Company license	1,194	-
Revenues of Anwar Al-Ard Power Generation license	2,549	-
Revenues of the Arab First Investment Company for Clean Energy license	1,124	1,394
Revenues of Ward Al-Jory Solar Power Generation Company license	1,193	1,819
Revenues of Zahrat Al-Salam Solar Power Generation Company license	1,179	1,864
Revenues of Al-Zanbaqa Solar Power Generation Company license	1,170	1,724
Revenues of Jordan Solar Power Generation Company	2,283	3,551
Revenues of Saqr Maan Solar Power Generation Company license	2,121	3,308
Revenues of Shams Maan Solar Power Generation Company license	17,703	<u> </u>
Total	5,626,853	5,474,917

13. Revenues of natural resources fee

This item consists of the following:

	2018	2017
	JOD	JOD
Mining license revenues	2,199,025	2,278,531
Quarries license revenues	261,021	283,030
Follow-up and inspection revenues	3,634,161	4,980,487
Mineral exploration license revenues	33,200	3,100
Total	6,127,407	7,545,148

14. Revenues of Radiation and Nuclear Activity License Fees

This item consists of the following:

	2018	2017
	JOD	JOD
Revenues of border gates	2,224,268	1,619,924
Revenues of licensing and inspection	421,146	231,528
Revenues of samples testing fees	3,792	5,084
Total	2,649,206	1,856,536

15. Revenues of Oil and Oil Products

This item consists of the following:

	2018	2017
	JOD	JOD
Gas agencies revenues	55,914	41,954
Gas warehouses revenues	28,856	21,606
Fuel stations revenues	485,255	235,908
Revenues of petroleum materials import fees	33,900	6,600
Total	603,925	306,068

16. Salaries and Wages and Other Benefits

This item consists of the following:

	2018	2017
	JOD	JOD
Employee salaries	993,692	957,318
Employee allowances	1,844,282	1,818,901
Employee bonuses	399,997	399,433
EMRC social security contribution	354,999	319,999
EMRC provident fund contributions	37,071	39,032
Total	3,630,041	3,534,683

17. General and Administrative Expenses

This item consists of the following:

	2018	2017
	JOD	JOD
Postage, telephone and internet	20,999	21,080
Fuel expenses	82,937	83,319
Stationary and printing	21,849	19,568
Electricity and water	106,569	99,225
Cleaning	33,615	33,626
Maintenance	43,915	78,850
Business trips	41,450	42,383
Training and scholarships	8,289	9,749
Car insurance	29,995	19,576
Materials and raw materials	4,970	8,864
Workshop entertainment expenses	1,399	6,031
Advertising expenses	6,176	5,106
Bank expenses	1,721	2,681
Bonuses for non-staff expenses	18,085	15,995
Other expenses	40,322	35,094
Rents	21,804	19,513
Pension and compensation	805	607
Total	484,900	501,267

18. <u>Capital Expenditures</u>
This item consists of the following:

	2018 JOD	
	<u> </u>	
Machines & Equipment	33,166	66,243
Miscellaneous Materials and Supplies	34,932	29,657
Training and qualification, research studies and sites expenses	49,707	72,860
Subscription and deposits expenses	79,141	56,052
Maintenance of buildings and various facilities	73,619	59,797
Administrative support for the supervision projects of EMRC sectors	309,113	293,090
Radiation monitoring plant	390	6,645
Operational licenses and systems	25,870	73,070
Promotion, advertising, awareness, and printing	7,653	-
Expenses for organization of the petroleum products distribution sector	9,310	
Total	622,901	657,414

19. <u>REVENUES (EXPENSES) FROM PREVIOUS YEARS</u> This item consists of the following:

	2018	2017	
	JOD	JOD	
Refund of electricity companies revenues estimated for previous year	(351,868)	(81,960)	
Total	(351,868)	(81,960)	

20. Legal Consultant Letter

The balance of the cases filed by third parties against EMRC amounted to JD 1,686,735.

21. FINANCIAL INSTRUMENTS

a. Fair value

Carrying values of financial assets and liabilities are approximately equal to their fair values. Notes to the financial statements indicate the fair value of those instruments. In addition, some of the accounting policies in note (2) present methods used in evaluating those instruments.

b. Market risk

Market risk is defined as the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. It comprises the following risks:

Currency risk

Currency risk is defined as the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

Other price risk

Other price risk is defined as the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices -other than those arising from interest rate risk or currency risk- whether those changes are caused by factors specific to the financial instrument or its issuer or factors affecting all similar financial instruments traded in the market.

- The financial instruments indicated in the financial position statement are not subject to other price risk.

Interest rate risk

Interest rate risk is defined as the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

The financial instruments indicated in the financial position statement are not subject to interest rate risk on its interest-bearing assets, which consist of deposits in the banks.

c. Credit risk

Credit risk is defined as the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge its obligations.

The Commission maintains cash at financial institutions with suitable credit rating.

The Commission maintains a proper control over the customers' credit limits and collection process.

22. COMPARATIVE FIGURES

Some comparative figures were reclassified to conform to the current year financial statements presentation.