Bezeq

Chapter 5

ENVIRONMENTAL RESPONSIBILITY

Environmental Responsibility

In line with trends in the communications market, most global companies have set targets for reducing energy consumption, and some even to the point of "zero" energy consumption, by shifting to the use of renewable energies. Another important goal of these companies is providing infrastructure and assistance to customers to cut down carbon dioxide emissions

Environmental Policy

Bezeq is working to reduce the environmental repercussions/ramifications/impacts and to uphold/maintain the principles of sustainable development out of a sense of responsibility, transparency and fairness, which constitute the basis for its operations, guided by the following principles: Bezeq follows a strict policy of preventing environmental damage, marked by a commitment to manage its environmental impacts in such manner as to ensure continuing improvement and to regularly measure its impacts on the environment, to strive to understand the ecological implications of its business operations and to take decisions accordingly, and to collaborate with other companies and public entities to promote environmental issues.

Bezeq strives to help even its customers to reduce the Company's negative impacts on the environment and streamline its energy consumption, always with an eye to ongoing innovation

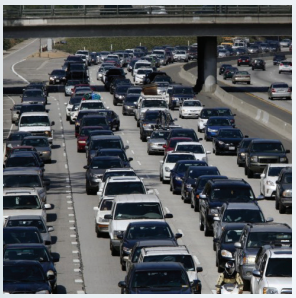
Bezeq's positive impact on the environment, through its customers, is both significant and appreciable. The shift to a digital world enables performing many more operations in a computerized manner and scaling back the negative environmental impacts.
Among the countless examples of this is conducting video calls instead of face-to-face meetings, which require for the most part a physical trip (in vehicles or on planes) and generate heavy emissions; reducing paperwork by using digital forms, and so on.

Cities generate 6 billion tons of waste annually

Cities consume 75% of the world's energy

Cities lose 50% water due to leaking infrastructure

Cities emit 80% of the CO_2 in the world



1.2 billion cars travel on the roads

70% of the human population lives in cities

Bezeq's Vision

Smart & Digital Everywhere

To transform Israel into the most advanced country in the world in terms of communications infrastructure and digital services, enabling people, families, businesses and cities to access/benefit from new technological progress, which also facilitates environmental protection as well as smart and innovative resource management.

The Challenge

To enable a good standard of living for a growing population, it is necessary to develop smart cities. Therefore, the Company has launched a new sphere of services – the "smart" home, "smart" business and "smart" city.

The Smart City

Smart cities are likely to play a decisive role in creating solutions for a sustainable world and are considered engines of innovation and entrepreneurship. A smart city strives for efficient and smart use of resources, while maintaining a balance among environmental, social and economic costs. information and communication technologies are used to improve the functioning, management and oversight of a range of systems and services, placing emphasis on the efficient consumption of energy, water, land and other natural resources.

Using the technological services provided by Bezeq, such as sensors and communication networks, to gather and monitor the information obtained from them, allows for streamlining various municipal processes, such as the reduction of energy consumption, waste disposal, air pollution monitoring, water command and control, transportation management, etc. The system provides an up-to-date picture of the situation for decision-makers, manages and processes a great deal of information from which insights can be drawn and used to carry out a streamlining process on a regular basis.

When Technology, People and Places Converge for a Smart Purpose

Bezeq's "smart city" systems expand the basket of services for the residents, create transparency in the city's core issues, enhance the quality of life and help to protect the environment by, among other things, reducing air pollution and cutting down traffic jams. All this is achieved with the help of hundreds of thousands of sensors, event prediction and linkage to the municipalities' management systems.

Smart Lighting

The prevention of light pollution through real-time adjustment of lighting to traffic and weather, as needed. Bezeq's smart lighting saves energy and controls electricity consumption.

Advanced Waste Management

In collaboration with GreenQ, Bezeq equipped garbage containers and bins with sensors that measure their fill-levels. The information is analyzed, which allows for planning the route of the garbage truck and emptying the waste bins according to the level of garbage in them. The system cuts down unnecessary mileage and prevents cases of overspilling bins that create sanitary hazards and environmental damage.

For 90% of the residents in Israel it is important to have sensors installed that measure air pollution

According to a national customers survey conducted on the matter by the research institute TNS.

Smart Sensors for Monitoring Quality of Environment

RadGreen is an army approved and certified Israeli development, which is incorporated in Bezeq systems. The systems include sensors for temperature, humidity, noise, radiation, CO_2 pollution and particulate pollution. All the information collected from the sensors is forwarded to control units reporting online to a remote management system, which, in turn, enables changes that prevent and reduce negative environmental impacts.

Monitoring of Water and Sewage Systems

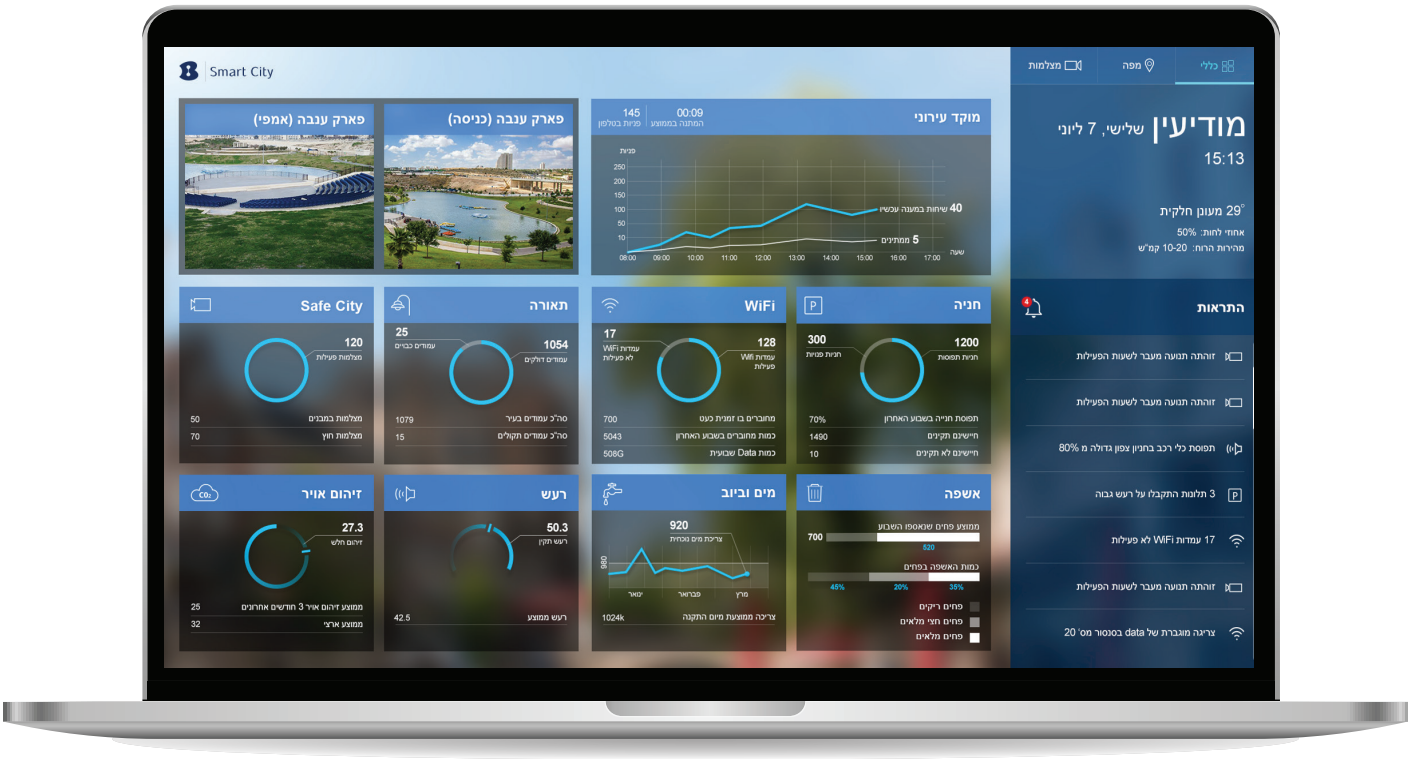
In conjunction with Miltel, Bezeq's systems generate savings in water through the identification of anomalous events such as the bursting and leaking of pipes, detection of flooding in facilities and measurement of water levels, via the use of smart sensors placed in pipelines, which monitor water pressure and measure water levels.

Securing Public Parks and Preventing Environmental Hazards

Bezeq's SafeCity systems are capable of detecting vandalism and loitering in prohibited areas such as nature reserves. The systems can also identify environmental hazards and send an alert in this regard to the relevant entities. In the future, it will be possible to foresee such events based on BigData.

Example

The system is already installed in the information service and can provide data on air pollution, noise, radiation, garbage, water and sewage, energy consumption, etc.



Bezeq's Smart Business System

The system monitors the sensors installed on a business's components and sends alerts in real time, based on scenarios and regularity predefined by the business owner.
The business is managed on a single central platform, from anywhere and anytime, allowing for considerable savings in resources.

System's Advantages

Alerts in real time

Monitoring and control

Savings in resources

The system comprises the following components:

Temperature sensor – Detects a change in temperature in refrigerators, rooms, storerooms, deep freezers, etc.

Volume sensor – Detects movement in a given volume of space.

Smoke and heat sensor – Meant to alert the moment it detects smoke and/or a rise in temperature.

Flood sensor – A water detector that is able to identify leakage of liquids or height level, as well as the accumulation of water in cellars, warehouses, storage silos, plants, etc.

Earthquake sensor – Sends an alert upon detecting movement of equipment.

Noise sensor – A sensor that detects unusual sounds.

Bcam – An advanced camera with a cloud recording system, which enables remote recording, viewing and management of the business's cameras.

How the sensor system helps save energy

For example, if the temperature sensor registers low temperature, indicating that an air conditioner is turned on, while no movement has been detected in the room for over 15 minutes, the system will send an alert to the business owner recommending that the air conditioner be turned off, so as to save energy and not waste unnecessary resources.

Smart Home

Bezeq protects the home and the quality of the environment

Bezeq's smart home also helps customers save on resources and reduce energy consumption, through smart management of the home air conditioning, lighting, shutters, etc.

Bezeq as an environmentally-responsible organization

Aside from our ability to help our customers cut down energy consumption and facilitate smart and more efficient management of resources, we carry out streamlining processes and evaluations of environmental impacts also as a business company.

Risk management – As part of the process for mapping the risks in the Company (risk roadmap), the processes for handling each risk topic are presented, including, among other things, aspects related to the environment. We identified several material environmental impacts deriving from our activities:

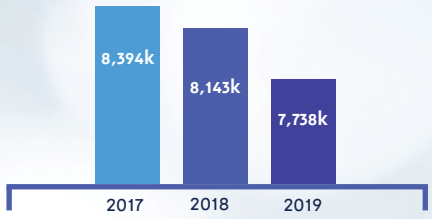
- **Air pollutant emissions:** from electricity consumption (both by the offices and by the products we supply) and as a result of travel in motor vehicles.
- **Greenhouse gas emissions:** direct and indirect emissions stemming primarily from electricity consumption, use of refrigerants in air conditioning systems and travel in the Company's fleet of cars.
- **Electromagnetic radiation** of electronic components, such as broadcasting antennas, communication and electricity cables, communication tools (computers, phones, etc.), and more.
- **Formation of wastes**: mainly solid, electronic, paper and plastic waste.

Resource Management at Bezeq

Fuel Consumption

The introduction of electric/hybrid vehicles into the Company's car fleet resulted in a significant reduction over recent years in the Company's fuel consumption. The Company also has diesel-powered emergency generators in some of its facilities (minimal consumption).

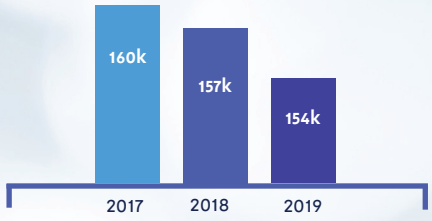
Gasoline Consumption in Liters 2017-2019



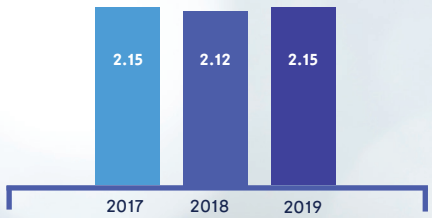
Electricity Consumption

Bezeq has been carrying out processes for streamlining energy consumption, such as replacing energy compressors and improving the energy efficiency of the Company's server rooms. Likewise, the Company conducts energy efficiency tests at its offices. Electricity consumption decreased significantly in 2019, also due to streamlining in the Company's office spaces.

Electricity Consumption in kWh 2017-2019



Relative Electricity Consumption (kWh per sqm) 2017-2019



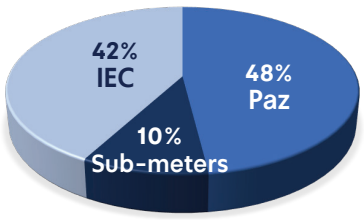
Improving Energy Efficiency of Server Rooms

The Company has two server rooms: one in Jerusalem, the other in Tel Aviv. Most of the Company's electricity consumption stems from the server rooms, administrative facilities and the former headquarters in the Azrieli Tower. The Company has been working continuously to improve energy efficiency and has an employee who serves in the capacity of energy overseer. In 2019, an energy survey was conducted at the Yafo and Narkis sites by an authorized professional from the Gadir company. That same year, an efficiency test was performed on 100+ ton chillers (a sophisticated electric machine that exploits the force of water for cooling purposes). Two of the chillers were replaced in the last five years for purposes of streamlining energy use, and servicing was carried out in accordance with regulations. The test was duly certified by the overseer at the Ministry of Energy, as of 2019.

Further actions for improving energy efficiency were carried out, such as closing off cold air passages between server cabinets, replacing lighting with LED lighting, replacing and reducing UPS systems without any change in the output capacity (4 UPS systems were replaced at the end of 2019). Such actions led to savings in terms of improvement in equipment efficiency as well as in terms of air conditioning and ventilation of rooms.

Besides the consumption of electricity from the Israel Electric Corporation (IEC), the Company purchases electricity from a power station in Ashkelon (owned by Paz). Some 50% of the consumption is from the private producer.

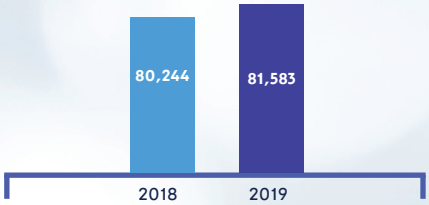
Electricity Consumption in kWh



Water Consumption

Continuous monitoring is performed on the water consumption in Bezeq facilities. The increase shown in the graph is the result of onetime events that occurred in 2019.

Water Consumption in Cubic Meters 2018-2019



Radiation / Broadcasting

The Company operates in accordance with all the laws and regulations on radiation, and fully complies with all requirements in the field. A VP in the Company is in charge of radiation matters. Clear goals have been set by the Company beyond what is required by law. An internal radiation procedure is in place at Bezeq, covering all requirements for compliance contained in the law and regulations on this issue.

Once every half year, a radiation forum convenes to deliberate on all the issues concerning radiation, while the Board of Directors meets annually to review and discuss radiation matters.

Bezeq has three types of radiation-emitting facilities that are defined by law: facilities exempt from inspections, approximately 2,000 facilities requiring type certification and around 38 facilities that need a construction and operation permit.

Bezeq conducts annual radiation inspections on 100% of the facilities requiring a construction and operation permit and on 10% of type-certified facilities, in accordance with the law and regulations (every year inspections are conducted on other facilities on the list, by rotation). In all the inspections carried out, the Company was found to be compliant with the law and regulations.

For the most part, the radiation levels detected were far lower than allowed by law and by the regulations of the Ministry of Environmental Protection.

Below is an example of the conclusions presented in the report on the electromagnetic radiation measurements taken at Bezeq, in radio radiation, radon and environmental quality tests conducted by the Gal Safe company:

E. Conclusions
1) At all measurement points accessible to the general public, at the site measured, the electromagnetic radiation levels were found to be compliant with the standards of exposure for the general public, established by the Ministry of Environmental Protection.
2) Bezeq's antennas comply with the requirements of TAMA (National Outline Plan) 36 concerning human safety.

The Company is responsible for ensuring that there are no health hazards as a result of the erection and operation of Bezeq's infrastructures and does preliminary planning aimed at preventing any deviation from the permitted radiation levels.

As the Company is obligated to provide an adequate work environment for its employees, it carries out regular radiation tests and reports to the relevant entities in the event of deviations (usually deviations stemming from electrical products), which are handled immediately. When necessary, measures are taken to remove radiation sources or to put in place internal shields. In certain cases, the Company even uses the services of an external company specializing in radiation testing to conduct wide-scale testing.

Citizens who are concerned about radiation matters can turn to Customer Service and the Company will send an authorized professional to examine the matter with appropriate instruments.

The tests and inspections are carried out fully and professionally, despite the fact that the absolute majority of cases involve facilities that do not require any inspection under the law and regulations on the matter.

The Company follows up the subject of radiation and issues meticulous reports regarding the tests carried out in office buildings and residential buildings. It sends annual professional reports to the Ministry of Environmental Protection, verifying compliance with the Radiation Law.

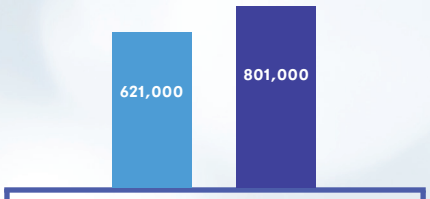
Background (Ambient) Noise

There are silencers in the generator rooms to reduce background noise.

Waste Management at Bezeq

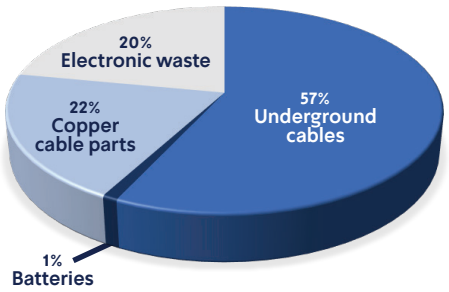
The Company has for many years rigorously complied with all the law's requirements regarding hazardous materials and waste disposal. Bezeq reports the quantities of waste that are redirected to recycling and also deals with the issue of electronic waste.

Waste Transferred to Recycling (in kgs) 2018-2019



The quantity of waste designated for recycling increased significantly in 2019 compared to 2018. There are additional types of waste that are redirected to recycling such as: empty cable drums, wood waste, iron scrap and EOL equipment..

Types of Recycled Waste at Bezeq 2019



Hazardous Materials Waste

Handling of hazardous materials is done by the Company's safety department. A manager has been appointed to oversee safety matters at the Company, and as such is responsible for writing up procedures and work instructions for regulating storage, use of hazardous materials and disposal of hazardous waste, holding trainings and drills on the subject of hazardous materials, and so on. The subject of hazardous materials is relevant to several of the Company's activities, among them: operating generators, diesel tanks and batteries. At any site where hazardous materials are used, the safety department issues safety spreadsheets and posts them in the sensitive areas. The Company has in place a special procedure regarding hazardous materials. This procedure regulates all the aspects of handling and disposing of hazardous materials at the Company, in accordance with the laws and regulations, as well as the guidelines of the Ministry of Environmental Protection.

Collecting Batteries

The Company's buildings have containers for collecting household batteries, to allow workers a convenient way to handle such waste. The batteries are collected and sent for orderly burial by the local authority.

Collecting Bottles for Recycling

Facilities are stationed in the Company's buildings for collecting plastic bottles for recycling.

Project for Transitioning to Green Infrastructure

Reducing the Use of Metals

Bezeq is making great efforts to shift to the use of green materials by utilizing fibers and cutting down the use of such materials as copper and lead. The Company no longer has lead infrastructure (all cables of this type have been removed and scrapped). In addition, copper infrastructure in the core network has been significantly flattened. Removed cables have been sold and recycled by the authorized bodies. Copper infrastructure remains only in the access network (the segment from the street cabinet to the customer's home), and there is no plan to cancel it for the time being.

Green Procurement

The Company buys mainly raw materials for infrastructure, such as cables, accompanying equipment and materials connected to equipment at the customers' premises (routers), and communication equipment that needs to be operated by the Company on a regular basis, but issues tenders with environmental emphases and carries out green procurement where possible.

Working Green at Bezeq

Bezeq works to manage its direct environmental impacts with great care, involving the employees in the process to the extent necessary. The Company does not confine itself to efficient management of resources in its business operations, but also strives to influence the activities of each and every employee even outside working hours, by providing the information and tools to go greener in such activities as driving a car, recycling, efficient energy use, etc. The Operations & Logistics Division, which is responsible for running the logistical and operational infrastructure of the Company, is in charge of implementation of Bezeq's environmental policy.

PAPERLESS

Bezeq's paper consumption has decreased significantly, as a result of an ongoing move to make Bezeq paperless. This move has even led to an improvement in the work processes.

Billing – Delivery of E-Bills to Bezeq Customers As of 2019, out of 1.2 million paying customers at Bezeq, approximately 760,000 receive a bill by email (instead of on paper). In other words, about 60% of all mail items are sent by email. The process of shifting payers to e-bills began around seven years ago. We are continuing to transfer customers to e-bills insofar as possible.
The Company also offers such services as the direct emailing service **Bdirect**, SMS and dispatch of a paperless newsletter to businesses.

Suppliers portal – which manages the digital invoices relayed by the suppliers. Such a move generated a significant savings in the quantity of printouts and dispatch notes comprising the traffic flow of information vis-à-vis the Company's suppliers.

In the past two years, **many digitization processes** have been instituted at the Company, in order to cut out redundant paperwork:

Procurement approvals portal for managers, computerized contractor journals for planning and execution departments at the Procurement Division, logistical issue without a voucher (computerized signature), vehicle issue via tablets, and more. In the area of human resources, the computerized platform ESS/MSS (employee and manager self-service) was developed, which saves a great deal of paperwork, such as approval of digital attendance spreadsheets and digital hours reports, while in the financial world, a digital payments report and automated payments release mechanism was developed.

Green Construction

defined as a green building, completing the move in October 2020. The move was made out of concern for the environmental quality and with a view to improve the Company's environmental impacts.

Principal requirements included: planning for reduced energy consumption in the building, use of volume detectors in shared spaces, use of light detectors for efficient utilization of daylight and energy savings, automatic switch-off of lighting, utilization of fresh air – an advanced air conditioning system that uses fresh air, prohibition on use of CFC refrigerants that harm the ozone layer, installation of water saving devices such as electronic faucets, a leakage monitoring system, chillers with an efficiency level of A/B, and more.

The project was awarded the Leed Gold rating in 2020.

PROJECTS LEED GOLD CERTIFIED

Additionally, in 2019, the Company vacated and sold certain facilities – such a move enables the reduced use of large facilities, leading to lower consumption and conservation of land.

List of Assets – Built-Up Area (sqm)

	Built-Up Area (sqm)	Land Area (sqm)
Ownership / Lease	101,280	852,333
Rental	64,893	30,575
Total	166,173	882,908

2020 Goals for Reducing Environmental Impacts

1. Continued decrease in electricity consumption at the Company – the kWh consumption projected for 2020 is an estimated 145 million kWh, down considerably from 2019.
2. Continued increase in the scope of materials transferred to recycling.
3. Increase in the number of hybrid vehicles in the Company's fleet replacing regular fuel vehicles. The positive trend will continue in 2020 with an increase of a further 300 hybrid cars to be added to the fleet.
4. Continued deployment of the fiber infrastructure.
5. Continued reduction in the use of redundant paperwork: Completion of the development of digital forms for several areas at the Company, among them, digital car forms concerning the assignment/ replacement of vehicles, and an upgraded logistics application for the technician to help with inventory management.