
سازه سازان
SazehSazan

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SazehSazan

"GUARDIAN OF THE OCEANS"

Persian Gulf Water Desalination Plant

www.sazehsazan.com

In His Name We Trust

SazehSazan Company (a private joint-stock company) started its activities in 1998 with the approach of managing infrastructure projects, relying on the experience and ability of its managers and large-scale projects implementation specialists in-line with macro policies in development of the country and the region.

In 2006, the company changed its priority to supply, production, and distribution of desalinated water and electricity production in a strategic reorientation. In cooperation with Iranian ministry of energy, the company started investing in industrial desalination projects and related facilities.

By following world class best practices and relying on creativity and pioneering of its management, the company expanded its activities to meet a part of the country's needs in the section of drinking water supply, production, and distribution and also electricity production. Carrying out numerous projects in different regions of Iran helped create an excellent example and achievement of the goals and vision of the water and wastewater industry in privatization.

GOALS AND VALUES

- Leadership in the privatization of the water industry
- Utilization of proven and state of the art technologies and development methods in the world
- Creating models in investment, management and operation
- Social role model creation

EXECUTED PROJECTS IN THE FIELD OF MANAGEMENT SERVICES

- Drinking water supply and transfer from Shooshtar to Ahvaz city.
- 400 kW electricity transmission network in Janah, Bandar-Abbas.
- ShahrChay's reservoir dam and related facilities in Urmia.
- Salman-Farsi reservoir dam, irrigation, and drainage network of plains in the riffle.
- The sixth national gas transmission line.

ShahrChay's Reservoir Dam in Urmia


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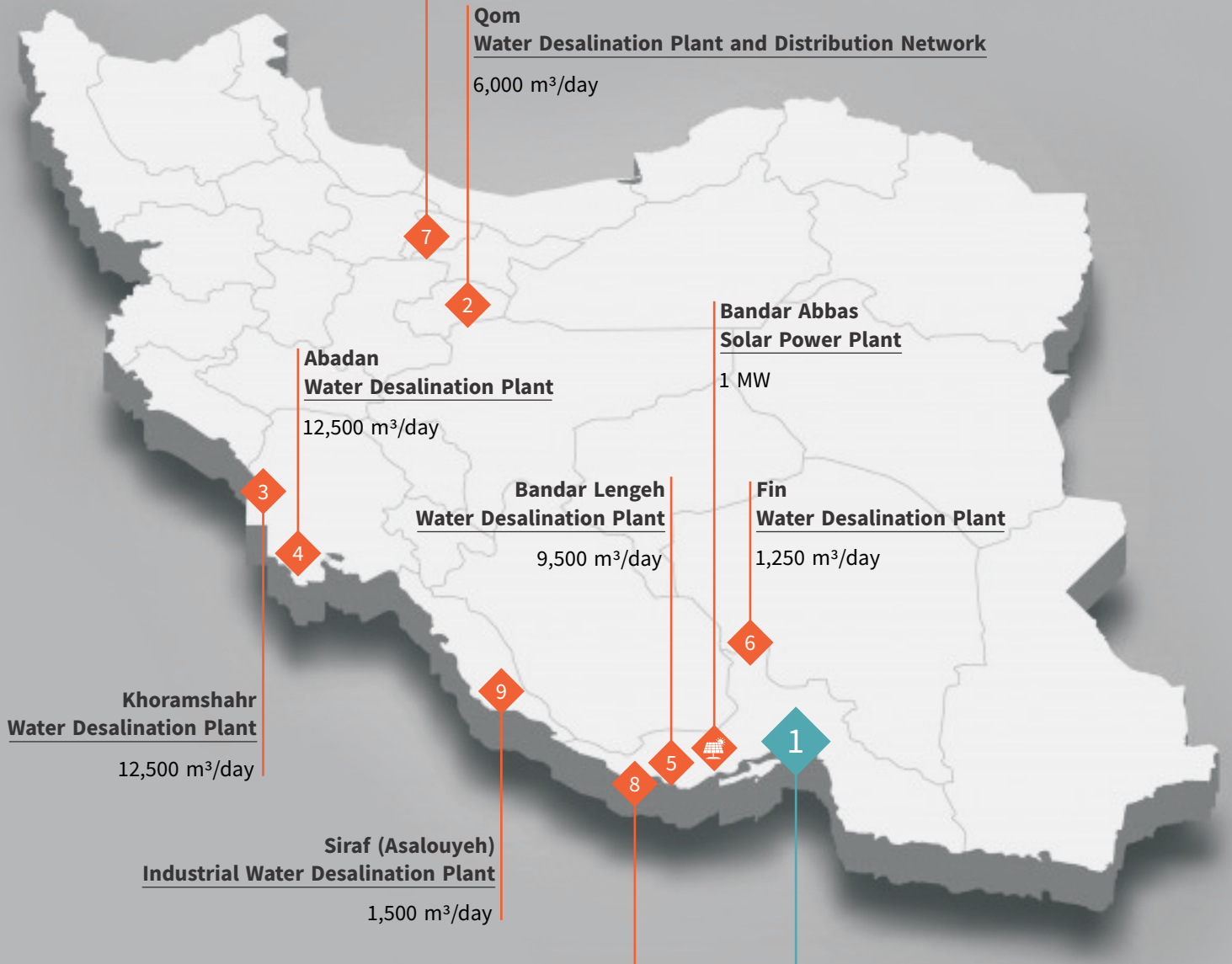
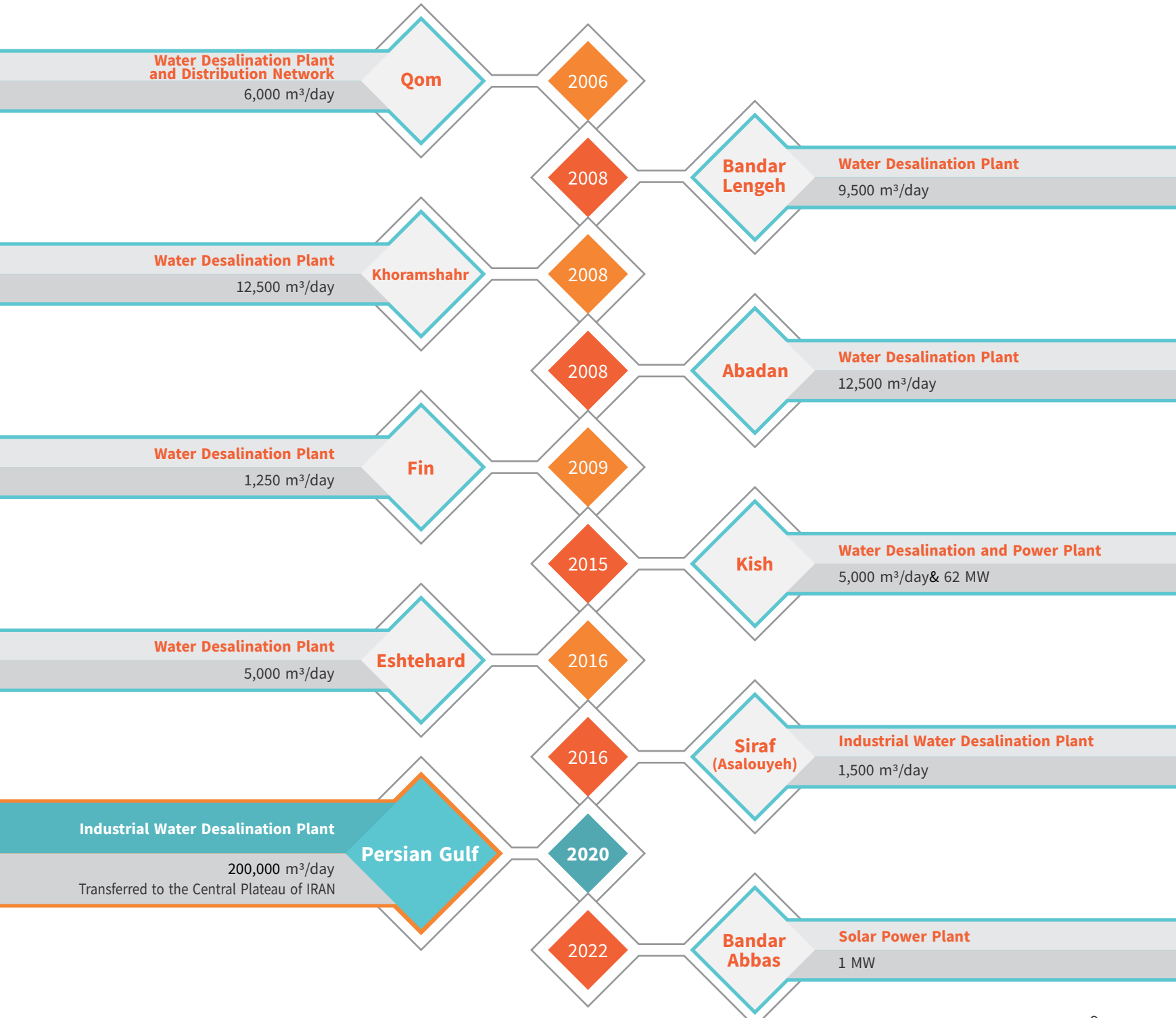
Persian Gulf 200,000 m³/day Industrial Water Desalination Plant

FRESHWATER SUPPLY AND DISTRIBUTION PROJECTS




Water Desalination Plant and Distribution Network
6,000 m³/day
Qom
2006
2008
Bandar Lengeh
Water Desalination Plant
9,500 m³/day
Water Desalination Plant
12,500 m³/day
Khoramshahr
2008
2008
Abadan
Water Desalination Plant
12,500 m³/day
Water Desalination Plant
1,250 m³/day
Fin
2009
2015
Kish
Water Desalination and Power Plant
5,000 m³/day& 62 MW
Water Desalination Plant
5,000 m³/day
Eshtehard
2016
2016
Siraf (Asalouyeh)
Industrial Water Desalination Plant
1,500 m³/day
Industrial Water Desalination Plant
200,000 m³/day
Transferred to the Central Plateau of IRAN
Persian Gulf
2020
2022
Bandar Abbas
Solar Power Plant
1 MW

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PERSIAN GULF WATER DESALINATION PLANT

Due to the increasing water demand of populated regions, industries, and mines located in Hormozgan and neighboring provinces and the existence of an open seas water source through Persian Gulf, the construction of SAKO water desalination plant with a final production capacity of one million cubic meters per day was decided by the industrial firms located in central Plateau of Iran at the beginning of 2012. SazehSazan company was awarded the BOO construction of the first phase of this strategic mega project, named as Persian Gulf water desalination plant in 2017. This project was put into operation in 2020 with the construction of water intake, wastewater disposal, and pre-treatment and treatment facilities for desalination using the reverse osmosis method.

PROJECT SPECIFICATIONS

- **Production capacity:**
  200,000 cubic meters per day
- **Off taker:**
  Ab-Asia Development Engineering Company
- **Water sale contract type:**
  Build, Ownership, and Operation (BOO)
- **Funding method:**
  Company financial resources and facilities of the National Development Fund
- **Contract duration:**
  25 years
- **Commencement of construction:**
  July 2017
- **Commencement of operation:**
  November 2020
- **Desalination technology:**
  Reverse Osmosis

WATER

A SYMBOL OF NATIONAL DEVELOPMENT

The hot and dry climate of central and southeastern Iran, combined with the need to develop industries and mines located in this area, has increased the need to desalinate and use of the Persian Gulf and the Sea of Oman water sources.

Therefore, by following the path of successful examples in the world, seawater in the Persian Gulf desalination complex is desalinated by reverse osmosis method and is transferred to industries and densely populated centers of Hormozgan, Kerman, and Yazd provinces by a pipeline with a length of more than 800 kilometers. It plays an important role in achieving sustainable development in the Central Plateau of Iran.

Persian Gulf Desalination Complex has increased the country's drinking water provision by 73 million cubic meters per year, and in practice has prevented the depletion of this amount of water from the country's underground strategic water reserves.

Ardakan Steel Industrial Complex

Chadormalu Mining and Industrial Company

Gol Gohar Mining and Industrial Company

Sarcheshmeh Copper Industrial Complex

Persian Gulf Water Desalination Plant

FINAL BUYERS

PERSIAN GULF
MAIN DESALINATION UNITS

Pre-treatment Unit:

- Dissolved Air Floatation (DAF)
- Dual Media Gravity Filtration System (DMGF)
- Feed Pumps
- Cartridge filters

Desalination Unit:

- High-pressure pumps
- Modules of high-pressure vessels
- Membranes
- Energy Recovery Devices (ERD)

Post-treatment Unit:

- Demineralization
- Brine and treated water pump station and pipelines to off-taker


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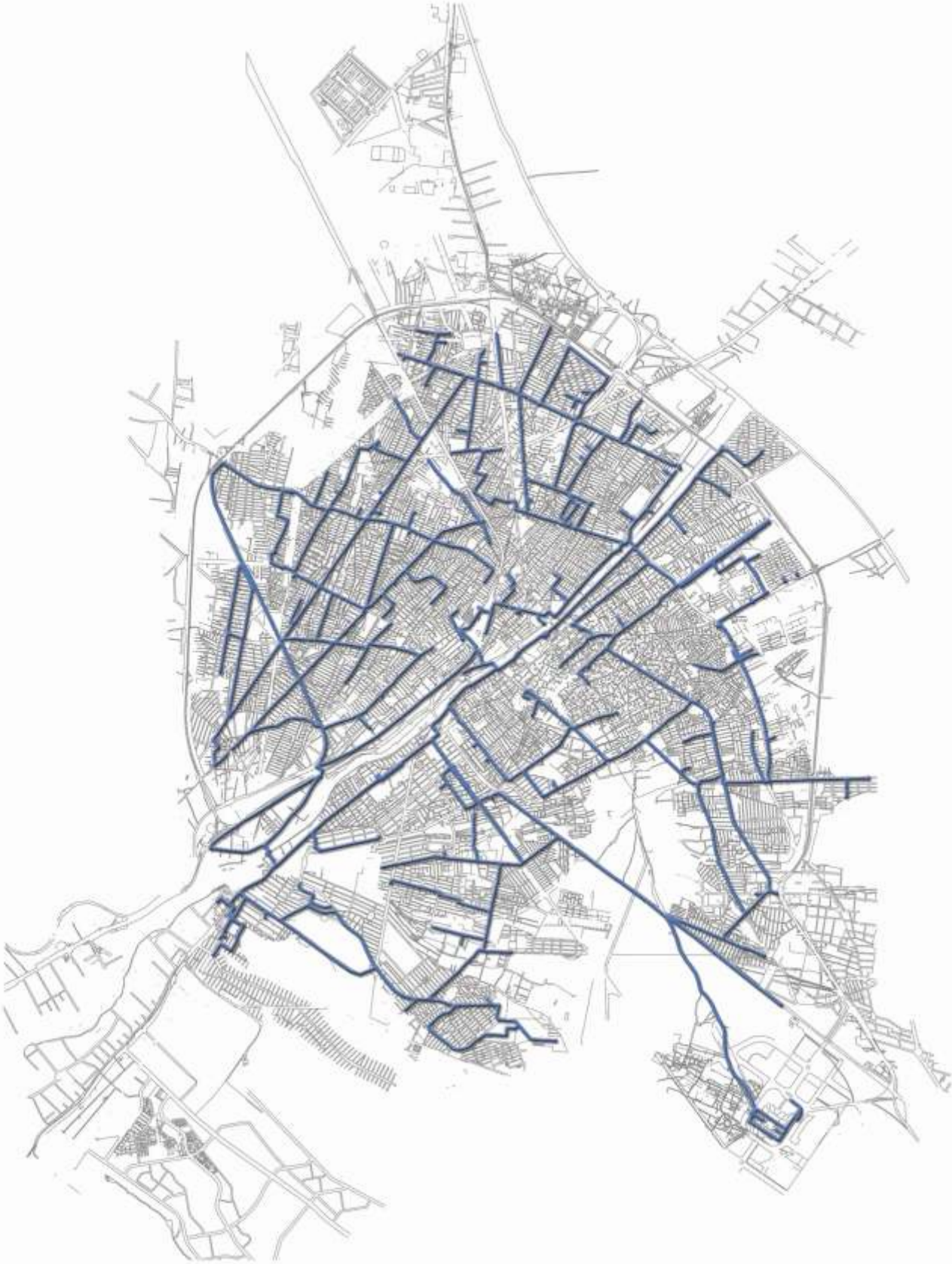
QOM CITY DESALINATION PLANT

Due to the salinity of potable water and the need of residents and pilgrims of Qom for quality drinking water, SazehSazan Company has taken a significant step towards satisfying the water requirements of this city by investing in the construction of desalination facilities as well as distribution network for the desalinated drinking water. As a result, now more than one million people can benefit from the quality drinking water produced in this complex. The drinking water is produced using four desalination units with desired quality parameters and under the supervision of Qom Water and Sewerage authority.

PROJECT SPECIFICATIONS

- **Operation commencement:**
  2006
- **Production capacity:**
  6,000 cubic meters per day
- **Regulator:**
  Qom Water and Sewerage Company
- **Water sale contract type:**
  Build, Ownership, and Operation (BOO)
- **Desalination technology:**
  Reverse Osmosis


WAVE CYBER
WAVE CYBER



QOM CITY'S FRESH WATERDISTRIBUTION AND SALES NETWORK

Distribution Network

The desalinated drinking water produced by SazehSazan company is distributed through the second distribution network dedicate to distribution of desalinated water, with a total length of more than 200 km, which was built by the Water and Sewerage Company of Qom Province. It should be noted that the mentioned network is independent of the existing tap water network in the city of Qom and SazehSazan company is responsible for its maintenance and operation.

Sales Network

The freshwater distribution network operates in three configurations:

- **Water Vending Machine:**

  Citizens can get the needed water from 300 units of water vending machine all over the town using a prepaid smartcard.

- **Branching to High Consumption Centers:**

  The water required for residential houses and public places such as hospitals, hotels, schools, etc. is connected to SazehSazan's network.

- **Tanker Filling Stations:**

  Several tanker filling stations have been installed for suburban areas which are far away from distribution network, to provide the water needed by the factories and towns around the city of Qom.

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KHORRAMSHAHR CITY WATER DESALINATION PLANT

To increase the drinking water quality in the region, the Desalination Complex of SazehSazan was established and put into operation.

WATER DESALINATION PROJECT SPECIFICATIONS

- **Operation commencement:** 2008
- **Production capacity:** 12,500 cubic meters per day
- **Off taker:** Khouzestan Province Water and Sewerage Company
- **Water sale contract type:** Build, Ownership, and Operation (BOO)
- **Desalination technology:** Reverse Osmosis

TREATMENT FACILITY DESCRIPTIONS

- **Operation commencement:** 2011
- **Production capacity:** 70,000 cubic meters per day
- **Contract type:** Operation, Repairs, and Maintenance
- **Technology:** Pre-clarifier and Pulsator

ABADAN CITY
WATER DESALINATION PLANT

Restrictions on freshwater resources as well as population growth in Abadan have increased the city's water needs. For this purpose, SazehSazan company has tried its best to overcome this limitation as much as possible, by constructing the desalination complex and also operating the facilities of the Abadan water treatment plant, in cooperation with the Khuzestan Water and Sewerage Company.

WATER DESALINATION PROJECT SPECIFICATIONS

- **Operation commencement:** 2008
- **Production capacity:** 12,500 cubic meters per day
- **Off taker:** Khouzestan Province Water and Sewerage Company
- **Contract type:** Build, Ownership, and Operation (BOO)
- **Desalination technology:** Reverse Osmosis

TREATMENT FACILITY DESCRIPTIONS

- **Operation commencement:** 2011
- **Production capacity:** 50,000 cubic meters per day
- **Contract type:** Operation, Repairs, and Maintenance
- **Technology:** Pre-clarifier and Pulsator

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BANDAR LENGEH CITY WATER DESALINATION PLANT

To supply the freshwater needs of Bandar-Lengeh city, SazehSazan Company in cooperation with Hormozgan Province Water and Sewerage Company commenced the construction of the desalination plant of the city under a contract. The raw inlet water of the desalination plant is supplied through beach wells and desalination of seawater is done in the next stages.

PROJECT SPECIFICATIONS

- **Operation commencement:**
  2008
- **Production capacity:**
  9,500 cubic meters per day
- **Off taker:**
  Hormozgan Province Water and Sewerage Company
- **Contract type:**
  Build, Ownership, and Operation (BOO)
- **Desalination technology:**
  Reverse Osmosis

FIN CITY
WATER DESALINATION PLANT

Because of water scarcity in the region and to meet the demands of this city, the project to produce quality drinking water with a total capacity of 1250 cubic meters per day was put into operation by SazehSazan Company in cooperation with Hormozgan Province Water and Sewerage Company.

PROJECT SPECIFICATIONS

- **Operation commencement:**
  2009
- **Production capacity:**
  1,250 cubic meters per day
- **Off taker:**
  Hormozgan Province Water and Sewerage Company
- **Contract type:**
  Build, Ownership, and Operation (BOO)
- **Desalination technology:**
  Reverse Osmosis

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ESHTEHARD CITY WATER DESALINATION PLANT

To supply part of quality drinking water to Eshtehard city with a population of about twenty thousand people, SazehSazan Company, in cooperation with Alborz Province Water and Sewerage Company, implemented the Eshtehard city desalination project. The implementation of this project has greatly contributed to the steady supply of water and compensates for the fluctuations in tap water production in the region.

PROJECT SPECIFICATIONS

- **Operation commencement:**
  2016
- **Production capacity:**
  5,000 cubic meters per day
- **Off taker:**
  Alborz Province Water and Sewerage Company
- **Contract type:**
  Build, Ownership, and Operation (BOO)
- **Desalination technology:**
  Reverse Osmosis

KISH ISLAND WATER DESALINATION AND POWER PLANT

To cope with the economic growth in Kish Island and satisfy the increasing water and power demand, the project for supplying 5000 cubic meters per day of quality drinking water and generation of 62 MW of electricity was built and put into service by SazehSazan Company in cooperation with MahTaab Kish Water Company and Kish Water and Power Company in the south of Kish Island.

WATER DESALINATION PROJECT SPECIFICATIONS

- **Operation commencement:** 2015
- **Production capacity:** 5,000 cubic meters per day
- **Sales model:** Free water sales
- **Contract type:** Build, Ownership, and Operation (BOO)
- **Desalination technology:** Reverse Osmosis

POWER PLANT SPECIFICATIONS

- **Operation commencement:** 2015
- **Normal capacity:** 62 MW
- **Number of units:** 2 gas turbines & 4 gas engines
- **Unit types:** AEG F5, AEG F6, Dorman & Perkins
- **Main fuel:** Natural gas
- **Backup fuel:** Gasoil

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SIRAF (ASALOUYEH) INDUSTRIAL WATER DESALINATION PLANT

To provide a part of the water demand of the South Pars region and the city of Siraf, SazehSazan Company, in cooperation with the South Pars Energy Special Economic Zone Organization and the Ministry of Energy, developed Siraf (Asalouyeh) desalination plant. So far, reliable production of this plant has contributed significantly to a steady drinking water supply in the region.

PROJECT SPECIFICATIONS

- **Operation commencement:**
  2016
- **Production capacity:**
  1,500 cubic meters per day
- **Sales model:**
  Free water sales
- **Contract type:**
  Build, Ownership, and Operation (BOO)
- **Desalination technology:**
  Reverse Osmosis
- **Development plan:**
  A desalination plant with the capacity of 100,000 cubic meters per day

Green Future

SazEn

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BANDAR ABBAS SOLAR POWER PLANT

On its way towards green future, as the first step SazehSazan initiated Bandar Abbas Solar Power Plant, as a pilot plan, in order to take part in the green projects and sustainable development, in BOO scheme.

Bandar Abbas solar power plant's capacity factor is about 19.4 percent, installed in a 1.2-hectare land with electricity generation of about 1,700 megawatts per year which is equivalents to plant more than 100 hectares of trees. The plant is equipped with 1848 solar panels with a nominal capacity of 540 watts each.

Social Responsibilities

MahTaab Sazan Foundation

SazehSazan

WATER MUSEUM

The concept design of this museum began in 2021 in the Persian Gulf Water Desalination Complex in the west of Bandar Abbas. The target audiences of this school are students of all educational levels and backgrounds. Teachers and educators of other schools along with students can attend the school in the form of half-day camps by previous appointments, and after visiting the various sections of the complex, get acquainted with various topics in the field of water.

The implementation stages of this project are being carried out in three phases of the main structure, green space, and public spaces, and it will be fully operational according to the schedule in 2024.

CONSTRUCTION OF SOLAR FARMS FOR THE FEMALE-HEADED HOUSEHOLDS

The experiences and successful implementation of the pilot construction project of 5 kW solar power plants for 9 female-headed households in three villages located in Kahnouj and Raver city was commenced from April to July of 2017, in the form of cooperation with Imam Khomeini Relief Committee, to construct 2000 solar power plants for honorable female-headed households in Kerman province.

With the active support and participation of the Imam Khomeini Relief Committee and the MahTaabSazan Foundation, the first step of this project aiming to build 520 solar farms in 9 cities and 125 villages of Kerman province began in late autumn 2018 and was put into operation in March of the same year.

Imam Khomeini Relief Committee with the cooperation of “Mellat” and “Mehr Iran” Banks, took over the main task of financing the project. The MahTaabSazan Foundation also used its experiences for the optimal implementation of the project to form a model of successful team collaboration between several institutions and organizations to perform a social activity

“NO TO PLASTIC” CAMPAIGN

Iran is one of the biggest consumers of plastic artifacts in the world. Environmental protection was the first alert call to start the “No to Plastic” campaign at the company's headquarters, and after a while, this campaign was on the agenda of the MahTaabSazan Foundation. Utilizing the significant number of visitors to the Persian Gulf Water Desalination Plant to create a movement and culture in the field of reducing plastic production and consumption, this movement seeks to spread the culture of reducing plastic production and consumption in the local community.

This program has already been carried out by the MahTaabSazan Foundation in Kahnouj city and several programs have been designed to increase public participation in this campaign.

WATER SUPPLY OF VILLAGES OF SISTAN AND BALUCHISTAN

MahTaab Sazan Iranian Charity Foundation, with the financial support of SazehSazan Company and some of other supporters, while defining a project called “On the Way to Development”, started water supply in the southern region of Sistan and Baluchistan in May 2021.

In the first phase of this project, the Mahtaab Sazan Foundation had installed and commissioned equipment for harvesting and sanitizing water and constructing a 2,200 meter pipeline to supply water to 18 villages in the cities of Chabahar & Dashtiari, and through this, more than 16,000 people have benefited from safe and drinkable water.

Founded in 1998

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SazehSazan

Biggest Private
Water Producer in IRAN

Owner of
9 Desalination Plants

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