



EWRDC

ENERGY & WATER RESOURCES DEVELOPMENT COMPANY

A HIGH-TEC PIONEER LEADING COMPANY

DAM CONSTRUCTION

TUNNEL & ROAD CONSTRUCTION

OIL, GAS. AND PETROCHEMICALS

ENGINEERING CONSULTATION

RENEWABLE ENERGY

TRADE



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Shushtar historical aquatic structures, are an interconnected set of bridges, gangways, mills, waterfalls, channels and massive tunnels of water guidance, that work in conjunction with each other, and have been constructed during the Achaemenid and Sassanid period to utilize more water (5th century B.C). In her logbook, famous French archaeologist Madam Jane Dieulafoy remembers the site as the largest industrial complex before the Industrial Revolution.





Energy and Water Resources Development Company

Energy and Water Resource Development Company (EWRDC) has been founded in 1987 when the completion of uncompleted water sector projects was the main concern of the country. By the end of the Iran-Iraq war (1988) and requirement to reconstruction of the war ruins, and the necessity of the country self-reliance in the design and implementation of massive dam construction projects, capable contractors started their responsibilities. At this time, EWRDC having relied on her high technical and engineering capability and the availability of efficient and hard-working personnel, started to build country and propagated the ability and self-confidence in the engineering community.

The results of great efforts, are various qualifications in specialized rankings and certifications and also, numerous awards and honors that have been obtained for the quality and rigorous implementation of projects over thirty years.

It is hoped that our company will be able to brighten the future by maintaining effective forces and expanding its activity abroad.

Board of Directors:

- 1-Khosro Ereghaei CEO and Vice Chairman of the Board
- 2-Kamran Sadighi Kaghazchi Chairman of the Board
- 3-Hamid Doaee Member of the Board

CEO's statement

After three decades of our company's activity, with hard work and continuous efforts, we have been able to contribute a great deal to the implementation and construction of a large number of national and international projects.

Believing the creativity and abilities of Iranian engineers and maximizing the use of domestic resources along with the use of modern technology, have made significant share for our contribution to the construction of our country.

Our commitment to important values such as quality, safety, and the environment has led to the company's growth and the successful implementation of many projects both in Iran and overseas.

We have been able to attract the trust of our employers, consultants, and partners, by relying on the teamwork accompanied by sympathetic, intimacy, motivation, love and honesty. Management and company staff try to remain robust, motivated, reliable and diligent on the way of implementing the company's commitments with a desirable quality and reasonable cost.

Undoubtedly, with such coherent efforts of those who contribute to the company's progress with their knowledge and experience, such valuable results can be achieved.

Therefore, by focusing on pre-mentioned important principles, we will continue to be among the top companies in major construction projects. We are prepared to provide consulting, design, implementation, monitoring, investment and partnership services in accordance with the engineering standards, in cooperation with the best consultant and contractor engineers, in order to meet the employer's expectations.



Organization values

Providing a quality and lasting product
Honesty, creativity and innovation
Transparency and accountability
Full compliance with individual and organizational discipline
Collective participation in activities
Attention to the growth and development of organizational learning
Attention to stakeholder rights
Environmental protection

Field of activity

Water (dam and water transmission)
Oil and gas
Road and transportation
Building
Facilities and equipment
Water (dam and water transition)
Mine industry



Mission statement

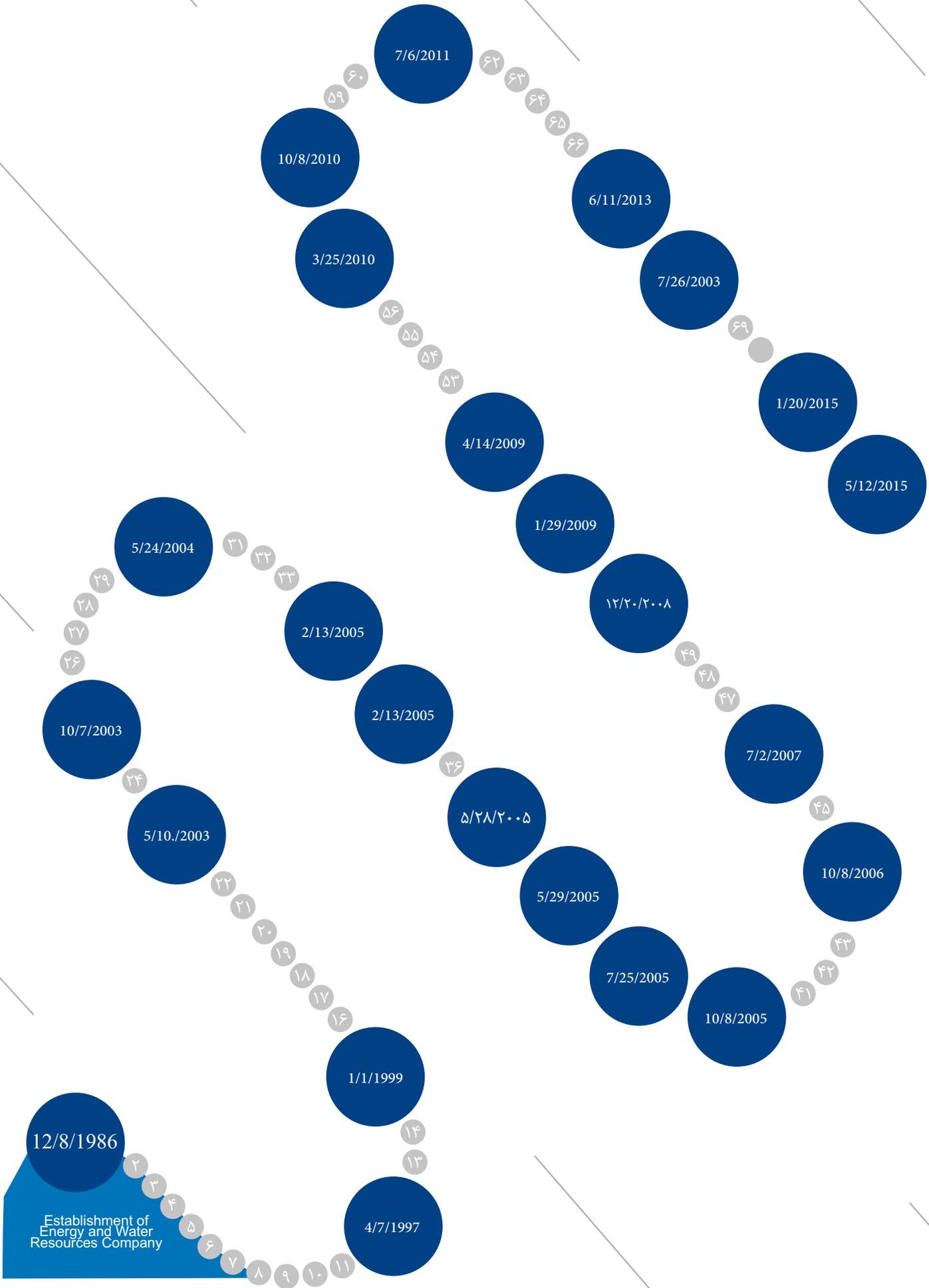
Developing the domestic market share and creating the appropriate infrastructure for participation in overseas markets through attracting investment and providing quality services in civil, mine and industry areas such as water, mine, oil, gas, transportation projects.

Creating value by satisfying the customers, shareholders and key stakeholders of the company.

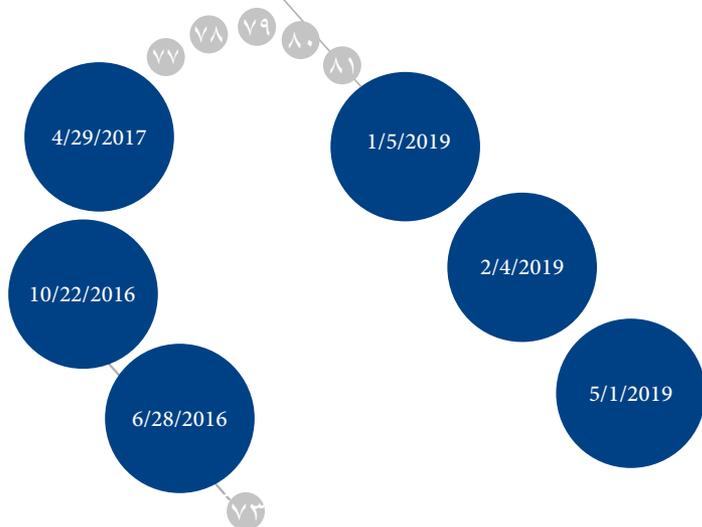
Achieving benefit from capable and knowledgeable personnel in order to use efficient and sustainable technologies.

Vision statement

Leading in the infrastructure development, by being active in domestic and overseas markets as a leading company with competitive advantage in the field of water, roads, buildings, facilities and equipment, oil and gas and superior technical and engineering services.



Projects calendar and important events of the company



1 1986/8/12, Establishment of Energy and Water Resources Development Co. (initial name: JAHAD TOSSE MANABE AB Co.)

2 1987/19/03, Award of contract for construction of Marun dam's roads, access tunnels and diversion tunnel

3 1987/24/06, Award of contract for construction of a camp and mobilization for Marun dam

4 1989/02/09, Award of contract for construction of Marun dam and related equipment

5 1990/01/01, Award of contract for construction of thirty-three residential units

6 1990/21/03, Award of contract for addendum 2-Phase 1 Access road to the Marun Dam

7 1992/25/07, Award of contract for construction of Jayzan Irrigation and Drainage System

8 1994/30/04, Award of contract for construction of the second power plant of Shahid Abbaspour dam

9 1996/02/11, Award of contract for addendum 1-construction of Marun reservoir dam

10 1997/15/03, Award of contract for construction of Delvari reservoir dam

11 1997/18/03, Award of contract for construction of water transmission tunnel of Karkhe dam

12 1997/07/04, Selection of Energy and Water Resources Development Company as a overriding company by the Minister of Jihad in 1996

13 1997/23/09, Award of contract for construction of Cheshme-Langan water transmission tunnel

14 1998/14/09, Award of contract for construction of Gavoshan water transmission tunnel

15 1999/01/01, Official inauguration of Marun Dam

16 1999/01/02, Award of contract for construction of Gavoshan dam

17 2000/05/03, Award of contract for construction of building and facilities for Marun power plant

18 2000/07/03, Award of contract for addendum of Karkheh water transmission tunnel

19 2001/09/06, Award of contract for addendum 1 of the second power plant of Shahid Abbaspour dam

20 2001/19/10, Award of contract for construction of part 1-B of the Patave to Dehdasht highway

21 2002/19/06, Award of contract for construction of Karun4 dam and its facilities

22 2003/21/03, Award of contract for rehabilitation of Papan dam in Kyrgyzstan

23 2003/10/05, Selection of Energy and Water Resources Development Company as a overriding company by the Minister of Jihad in 2002

24 2003/16/09, Award of contract for addendum 2 of the second power plant of Shahid Abbaspour dam

25 2003/07/10, Appreciation of respected Minister from Energy and Water Resources Development Company for the successful implementation of the headrace tunnels of Karkhe dam power plant

26 2004/19/5, Award of contract for completion of Karabura dam

27 2004/23/5, Award of contract for construction of Sabalan water transmission system

28 2004/24/5, Award of contract for Construction of Shahr-e-Bijar reservoir dam and associated facilities

29 2004/24/5, Start of the second power plant of Shahid Abbaspour operation

30 2004/24/5, Appreciation of respected president from Energy and Water Resources Development Company for the successful implementation of the Gavoshan dam

31 2004/8/6, Award of contract for addendum 1 of Marun power plant and associated buildings

32 2005/6/1, Award of contract, for remaining operation of the second power plant of Shahid Abbaspour dam

33 2005/31/1, Award of contract for addendum 2 of Marun power plant and associated buildings

34 2005/13/2, Appreciation of respected president from Energy and Water Resources Development Company for the successful implementation of the second power plant of Shahid Abbaspour dam.

35 2005/13/2, Official inauguration of Gavoshan dam

36 2005/11/5, Award of contract for Construction of Siazakh reservoir dam and associated facilities

37 2005/28/5, Appreciation of respected president from Energy and Water Resources Development Company for the successful implementation of the Chashme Langan water transmission project

38 2005/29/5, Official inauguration of Cheshme Langan water transmission tunnel

39 2005/25/7, Impoundment of Delvari dam

40 2005/8/10, Selection of the Gavoshan dam and associated facilities, as the superior project in the field of hydraulic structures, in the 3rd concrete conference of Iran

41 2006/18/06, Award of contract for construction of Doyraj reservoir dam and associated facilities

42 2006/30/07, Award of contract for construction of the cut of wall for Karkhe dam

43 2006/21/08, Award of contract for complementary operation of Delvari dam

44 2006/8/10, Selection of the Delvari dam, as the superior project in the field of concrete structures, in the 4th concrete conference of Iran

45 2006/29/10, Award of contract for construction of Zagrous water tunnel (part 1B)

46 2007/02/07, Official inauguration of Delvari dam

47 2008/22/03, Award of contract for construction of BabaHeydar (Ghadir) reservoir dam

48 2008/06/08, Award of contract for Phase1-Line3 Tehran Subway

49 2008/16/09, Award of contract for construction of Line2-Karaj Subway (Ramp5)

50 2008/20/12, Achieving record of concrete casting as 83000 m³ per month at Karun4 dam

51 2009/29/01, Official inauguration of Gavoshan water transmission tunnel

52 2009/14/04, Selection of Energy and Water Resources Development Company as a top company by the Ministry of Jihad in 2008

53 2009/19/04, Award of contract for construction of Line2-Karaj Subway (Ramp9)

54 2009/04/07, Award of contract for construction of diversion tunnel Sardasht dam input structure

55 2009/28/09, Award of contract for complementary operation of Delvari dam

56 2010/06/01, Award of contract for addendum 1 of karun4 dam and associated structures

57 2010/25/03, Impoundment of Karun4 dam

58 2010/08/10, Selection of the Karun4 dam, as the superior project in the field of concrete structures, in the 8th concrete conference of Iran

59 2011/11/05, Award of contract for complementary operation of Siazakh dam

60 2011/16/05, Award of contract for completion of Shahr-e-Bijar reservoir dam Operations and associated facilities

61 2011/06/07, Official inauguration of Karun4 dam

62 2011/23/08, Award of contract for Executing part of the necessary areas for the installation of cable cranes and concrete machines

63 2012/28/04, Award of contract for construction of Station 3-3 Phase1-Line3 Tehran Subway

64 2012/18/07, Award of contract for complementary operation of Doyraj dam

65 2013/03/09, Award of contract for construction of the structures and walls of the intake system of the dam diversion system of Khersan3 power plant

66 2013/12/03, Award of contract for construction of official, welfare and residual camps for Khersun3 dam and power plant

67 2013/11/06, Doyraj dam official inauguration

68 2013/26/07, Impoundment of Siazakh reservoir dam

69 2013/6/10, Award of contract for Zagrous water transmission tunnel (southern part of Leileh)

70 2014/29/11, Award of contract for addendum of Phase1-Line3 Tehran Subway

71 2015/20/01, Official inauguration of Bijar dam

72 2015/12/05, Privatization of Energy and Water Resources Development Company

73 2016/06/03, Award of contract for excavations remaining from the input structure of Khersan3 diversion system

74 2016/28/06, Changing the name of JAHAD TOSSE MANABE AB Company to TOSSE MANABE AB VA ENERGY (Energy and Water Resources Development Company)

75 2016/22/10, Award of contract for extracting ore in Mahallat-Atashkoh

76 2017/29/04, Official inauguration of Zagrous tunnel

77 2017/11/05, Award of contract for complementary operation of Station Laleh-Line1 Tabriz Subway

78 2017/13/07, Selection of TOSSE MANABE AB VA ENERGY Company as a winner of the tender for the construction of the Green dam

79 2017/26/08, Selection of Energy and Water Resources Development Company as a winner of the tender for the construction of the retaining wall, fencing and guardrail of Kian petrochemical site

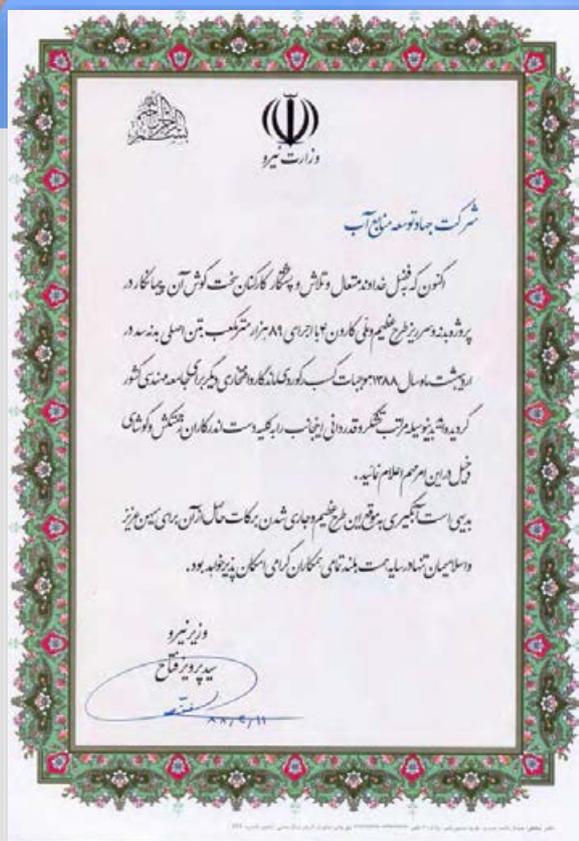
80 2017/25/11, Selection of Energy and Water Resources Development Company and Petrochemical Industries Development Management Co. as a winner of the tender for Paving the roads and corridors of Phase 2 Petrochemicals

81 2018/22/01, Selection of Energy and Water Resources Development Company as a winner of the tender for the construction of water transmission tunnel from Gelevard dam

82 2019/01/05, Award of contract for construction of the retaining wall, fencing and guardrail of Kian petrochemical site

83 2019/2/4, Initiation of operation of Khersan dam's early work

84 2019/01/05, Official inauguration of Zagrous Water Transmission Tunnel



Certifications and appreciations

Grade of the company

Field of Activity	Grade
Water	1
Road and Transportation	1
Building	1
Facilities and Equipment	2
Oil and Gas	5

- Receive a letter of appreciation from Iran president Khatami for implementation of Cheshmeh Langan Water Transition Project to Zayandehrud in 2005
- Receive a letter of appreciation from Iran president Khatami for the construction of the second hydropower plant of Shahid Abbaspour dam in 2004
- Receive a letter of appreciation from Iran president Khatami for the construction of the Gavoshan dam in 2004
- Receive a Letter of appreciation from Mr. Chit Chian, Minister of Energy, for the Long Zagros Tunnel Drilling Operations in 2017
- Receive a letter of appreciation from Mr. Chit Chian, Minister of Energy, for the operation of Ayatollah Behjat Reservoir dam
- Receive a letter of appreciation from Mr. Namjoo, Minister of Energy, for the Karun Dam impoundment
- Receive a letter of appreciation from Mr. Namjoo, Minister of Energy, for the Doyraj Dam impoundment
- Receive a letter of appreciation from Mr. Namjoo, Minister of Energy, for the implementation and construction of Siyazakh Dam in 2013
- Receive a letter of appreciation from Mr. Namjoo, Minister of Energy, for drilling the first block to Nosood tunnel in 2012
- Receive a letter of appreciation from Mr. Fattah, Minister of power, for implementation of 89000m³



- Receive a letter of appreciation from Mr. Bitaraf, Minister of power, for construction of the first hydro power plant of Marun, in 2004
- Receive a letter of appreciation from Mr. Bitaraf, Minister of power, for construction of the water transition/transmission tunnel of Karkhe hydropower plant
- Receive a letter of appreciation from Mr. Ahmadzadeh, executor of dam, hydropower plant and water transition system
- Receive a letter of appreciation from Iranian Concrete Institute, for the high quality in the design and construction of Delvari reservoir Dam
- Receive a letter of appreciation from Iranian Concrete Institute, for the high quality in the construction of Gavoshan Dam
- Receive a letter of appreciation from Iranian Concrete Institute, for the high quality in the construction of Karun4 Dam

The major quantities of completed projects

Project	Excavation
Major quantities	m³
Marun Reservoir Dam	1,600,000
Gavoshan Reservoir Dam	2,000,000
Karun-IV Concrete Dam	1,850,000
Karun-IV access roads and substitute road	150,000
Ayatollah Behjat Reservoir Dam	2,100,000
Siazakh Reservoir Dam	210,000
Shohaday-e-Maharram Reservoir Dam	1,850,000
Raees-ali Delvari Dam	350,000
Ghadir Reservoir Dam	850,000
Papan Dam (in Kyrgyzstan)	850,000
Karabura Dam rehabilitation (in Kyrgyzstan)	326,000
Gavoshan water transmission tunnel	-
Cheshme Langan water transmission tunnel	-
Kharkhe dam powerhouse headrace tunnels	-
Sabalan water transmission tunnel	150,000
Jayezan irrigation and drainage network	2,500,000
Abbaspour 2 nd hydropower house	460,000
Marun hydropower house	-
Yasouj-Dehdasht highway	3,200,000
Open cut of Line 3 of Tehran subway	350,000
Azadegan station (A3-3)-Line 3 of Tehran subway	180,000
Zagros water transmission tunnel, part 1-B	180,000
Access road to Zagros water transmission tunnel	2,500,000
Zagros water tunnel, South part	-
Building and equipping of official welfare building of Khesun III dam	40,000
Diversion tunnel intake and grouting galleries of Khesun -III dam	1,000
Line 2 of Karaj Subway	250,000
Line 1 of Tabriz Subway	
Total	21,962,000

Embankment	Concreting	Tunnel drilling	Road construction	Piping	Metal works		Building construction
					Light, Ton	Heavy, Ton	
m ³	m ³	M.L	km	M.L			m ²
9,000,000	280,000	6,000	90	4,700	9,500	500	7,700
9,200,000	350,000	4,800	15	16,000	3,000	800	-
850,000	1,800,000	1,500	-	-	16,500	420	2,600
75,000	6,000	-	30	-	-	-	-
3,900,000	180,000	1,250	10	820	6,500	150	4,710
1,900,000	85,000	800	35	400	2,099	210	1,200
4,600,000	150,000	600	15	640	700	100	5,500
180,000	320,000	950	5	-	1,700	260	500
2,000,000	35,000	400	5	420	900	120	855
-	20,000	350	-	-	10	-	-
-	25,000	650	-	80	150	10	-
-	180,000	21,000	-	-	18,000	410	2,490
-	95,000	13,200	-	-	650	60	1,830
-	100,000	3,500	-	-	6,800	160	800
10,000	40,000	2,700	-	-	30	5	600
1,550,000	70,000	-	60	14,700	2,500	4	-
-	200,000	4,300	-	-	18,500	2,800	1,510
-	50,000	2,500	-	-	9,300	450	-
1,300,000	30,000	-	55	60	300	55	-
120,000	250,000	600	-	-	150	200	-
50,000	70,000	700	-	2,900	1,150	650	5,276
-	85,000	9,000	-	20,000	5,200	400	-
850,000	14,000	-	45	-	-	-	7,200
-	35,000	4,500	-	50,000	1,600	350	-
-	10,000	-	3	-	650	24	9,280
-	12,000	2,700	2	-	250	5	-
100,000	70,000	2,500	-	-	1,700	1,500	-
26,000	36,000				950	110	520
35,685,000	4,337,000	84,500	370	110,720	107,839	9,753	52,571



Machatschkala

Georgia

Tbilisi

Armenia

Tehran

Baghdad

Iraq

Iran

Kuwait

Persian Gulf

Al Dammam

Bahrain

Dubai

Riad

Qatar

Abu Dehabi

- Water sector (Dam and water transition) ●
- Facilities and equipment ●
- Road and transportation ●
- Building ●

14

Water sector (dam, tunnel, and water transition)

Design and construction of large reservoir dams, regulating and diversion dams, water transmission tunnels and irrigation & drainage network are of the most important water engineering activities with the special historical and geographical conditions of each region contributing to its formation and expansion. Providing agricultural water and potable water and avoiding destructive losses of floods in order to store and optimally save water resources, and Also the use of hydroelectric power is one of the main priorities of the country.

Therefore, in order to carry out the planning, in line with the required funding a large number of water projects are pursued and implemented each year. Energy and Water resources Development Company as a one of the biggest contractors, has ever managed great national and international projects.



Selected projects

Raees-Ali Delvari Dam

Karun-IV Dam

Marun Dam

Shahr-e-Bijar Reservoir Dam

Gavoshan Reservoir Dam

Siazakh Reservoir Dam

Khersun3 dam and hydropower plant

Ghadir Reservoir Dam

Doyraj Reservoir Dam

Zagrous water transmission and tunnel and related structures

Cheshme langan water transmission tunnel

Sabalan Diversion tunnel and hydraulic structures

Gavoshan water transmission and access tunnel

Water transmission tunnel and downstream canal of

Karkhe dam hydropower plant

Jayezan irrigation and drainage network

Completion of Karabura Dam

Rehabilitation of Papan Dam



Raees-Ali Delvari Reservoir Dam ▲ ▲

Dam Type: Concrete double arch
Dam height from bedrock: 115 m
Crest Length: 225 m
Spillway: Free ogee on the dam body and gated sliding spillway on right abutment
Diversion System: One tunnel with length of 281 m, and diameter of 7.1m, and a concrete tied cofferdam
Reservoir Capacity: 685 million m³
Concrete casting: 320,000 m³
Employer: Fars Regional Water Authority
Hydro-electric capacity: 4.19 MW
Annual production: 6.59 GW

Karun4

Employer: Ministry of power-Iran
Water and Power Resources Company
Dam type: Concrete double arc
Dam height: 230 m
Crest length: 225 m
Reservoir capacity: 658,000,000 m³
Erth-fill: 850,000 m³
Concrete casting: 1,800,000 m³





Marun Reservoir Dam



Dam Type: Rock-fill with clay core

Dam Height: 165m

Reservoir capacity: 1,250,000 m³

Employer: Khuzestan Water and Power Authority

Consultant: Mahab Ghodss Consulting Engineering Co



Ayatollah Behjat (Shahr-e-Bijar) Reservoir Dam

Dam type: Concrete Face Rockfill Dam (CFRD)

Dam height: 90.5 m

Crest length: 430 m

Reservoir volume: 105 million m³

Spillway type: Free Ogee

Diversion tunnel: One tunnel, with dia. 3.8 m and length of 628 m, plus an earthfill cofferdam with soil-cement face.

Employer: Gilan Regional Water Authority - Consultant: Yekom consulting Engineers Co.







▲ Ghadir Reservoir Dam (Baba heidar)

Dam type: Rockfill with clay core
Dam Crest length: 624 m
Crest Width: 12 m
Dam Height from Bedrock: 68 m
Spillway: Free Ogee
Employer: Chahar-mahal & Bakhtiary
Regional Water Authority
Consultant: ABTOSSEPAYDAR Co.

▼ Gavoshan Reservoir Dam

Dam type: Rock-fill with Clay core
Dam height: 123 m
Dam crest length: 625 m
Reservoir volume: 550 million m³
Spillway type: Free Slide
Employer: Kermanshah Regional Water Authority
Consultant: Mahab Ghodss Consulting Engineering Co.





▲ **Siazakh Reservoir Dam**

Dam type: Rockfill - Earthfill with clay-core
 Dam height: 76.5 m
 Dam crest length: 285 m
 Reservoir volume: 230 million m³
 Spillway type: Gated, in left bank
 Employer: Kordestan Regional Water Authority
 Consultant: AB-NIRU Consulting Engineers



▲ **Khersun 3 Dam**

Dam Type: Concrete double arch
 Dam height: 195 m
 Crest Length: 470 m
 Crest width: 6 m
 Spillway: Free shoot on the dam body and side spillway
 Spillway Capacity: 6300 m³/s
 Reservoir Capacity: 1.15 billion m³
 Employer: Iran Water and Power Resources Development Co.
 Consultant: Aban Pazhouh

Shohaday-e Moharram (Doyraj) Reservoir Dam

Dam type: Earthfill with clay-core

Dam height: 66 m

Dam crest length: 1360 m

Diversion tunnel: two tunnels, with dia. 5.5 m and total length of 596 m

Spillway type: Free Ogee

Reservoir volume: 205 million m³

Cut-off wall: 71.200 m²

Employer: Ilam Regional Water Authority

Consultant: Mahab Ghodss Consulting Engineering Co.







Zagros Water Transmission Tunnel

Total length of tunnels: 13.5 km
Finished dia. of tunnels: 5.42 m
Construction Method: NATM and
Mechanized (with TBM)
Concrete Casting: 134,000 m³
Excavation: 2,680,000 m³
Earth fill: 850,000 m³
Employer: Iran Water and Power Resources
Development Co.
Consultant: Mahab Ghodss
Water discharge: 70 m³/s

Gavoshan Transmission Tunnel

Tunnel Length : 20.2 km (5 sections)
Access tunnels:4 no. with total length of 3713 m
Tunnel capacity:30 m³/s
Tunnel excavation dia.:5.5 m
Tunnel finished dia.:4.3 and 4.8 m
Employer: West Regional Water Authority
Consultant:Mahab Ghodss Consulting Engineering Co.



Sabalan Dam Transition System

Tunnel Length : 1700 m (5 sections)
Tunnel capacity:14 m³/s
Siphon length:700 m
Channel length:300 m
Tunnel Excavation:40.000 m³
Employer:West Azarbaijan Regional Water Authority
Consultant: Ashenab Consulting Engineering Co.



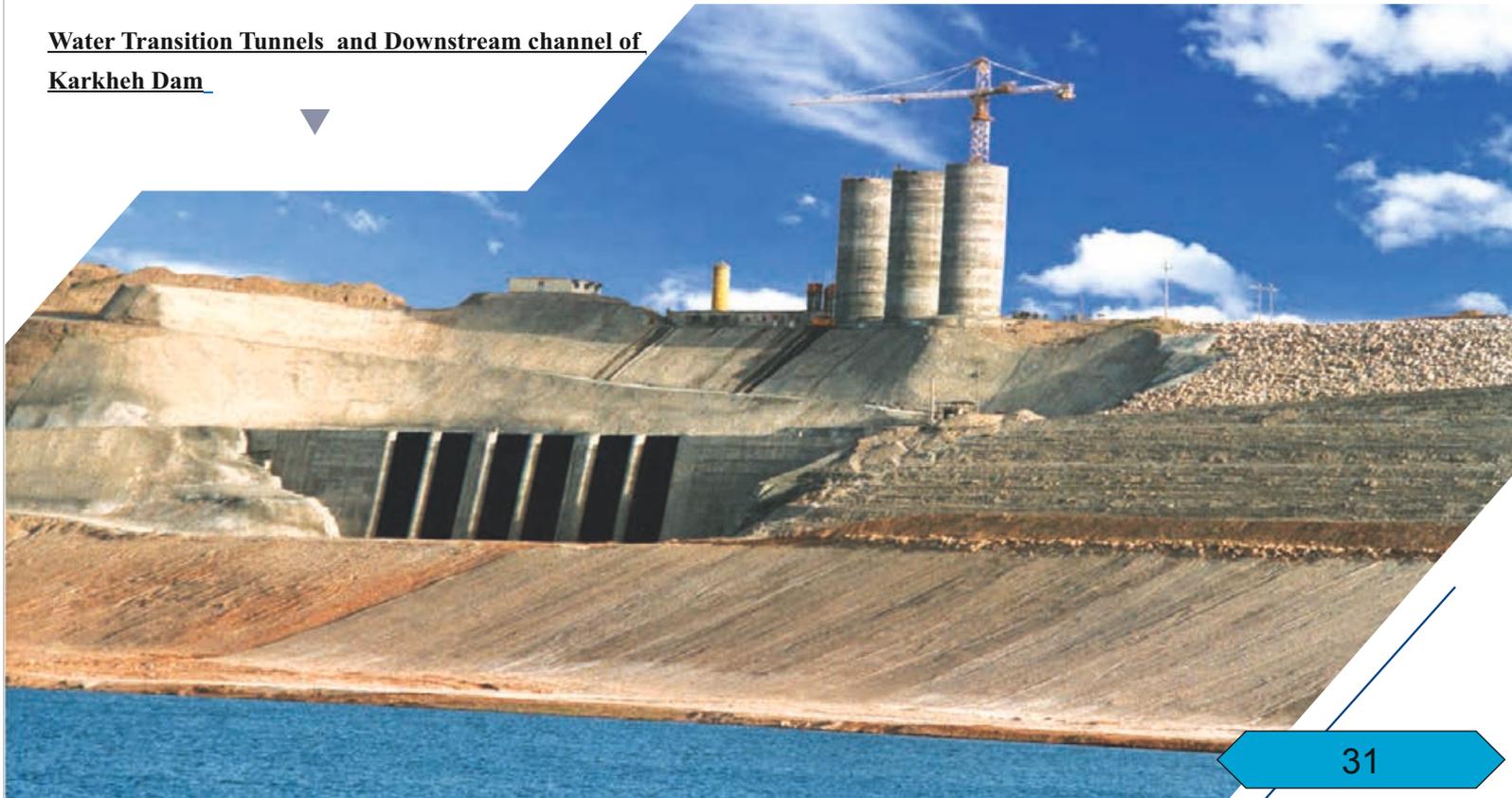
Cheshme-Langan Water Transmission Tunnel

Tunnel Length : 7 km (5 sections)
Tunnel capacity: 22 m³/s
Tunnel finished dia.: 3.2 m
Tunnel Excavation: 145,000 m³
Concrete Casting: 80,000 m³
Employer: Isfahan Regional Water Authority
Consultant: Zayandab Consulting Engineers Co.

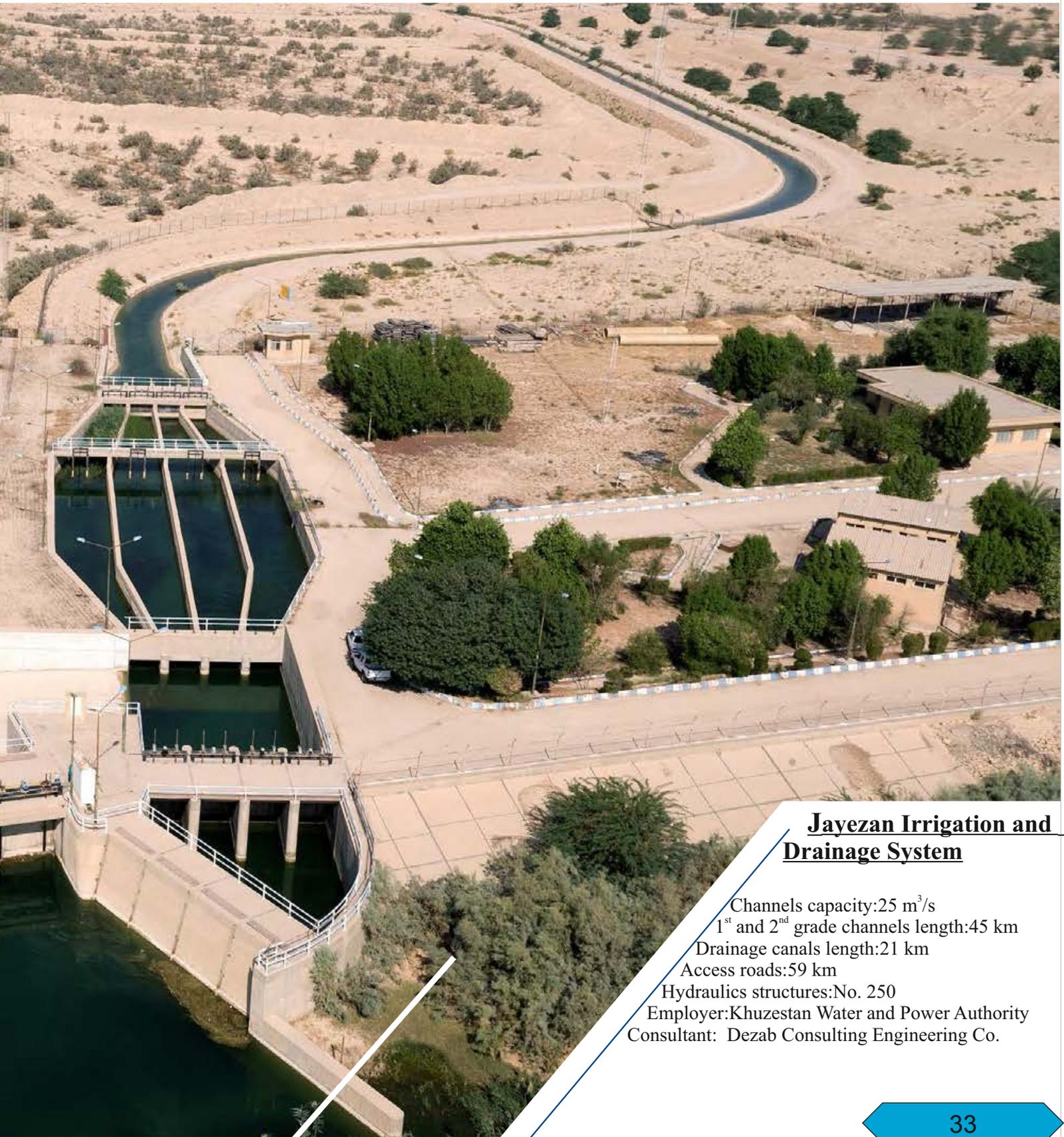


Intake Tunnels: 3 no. , total length 1350 m
Intake Tunnels dia.: 5.5 m
Downstream Channel length: 260 m
Vertical shafts: 3 x 62.5 m (Total 187.5 m)
Concrete Casting: 100,000 m³
Employer: Iran Water and Power
Resources Development Co.
Consultant: Mahab Ghodss Consulting Engineering Co.

Water Transition Tunnels and Downstream channel of Karkheh Dam

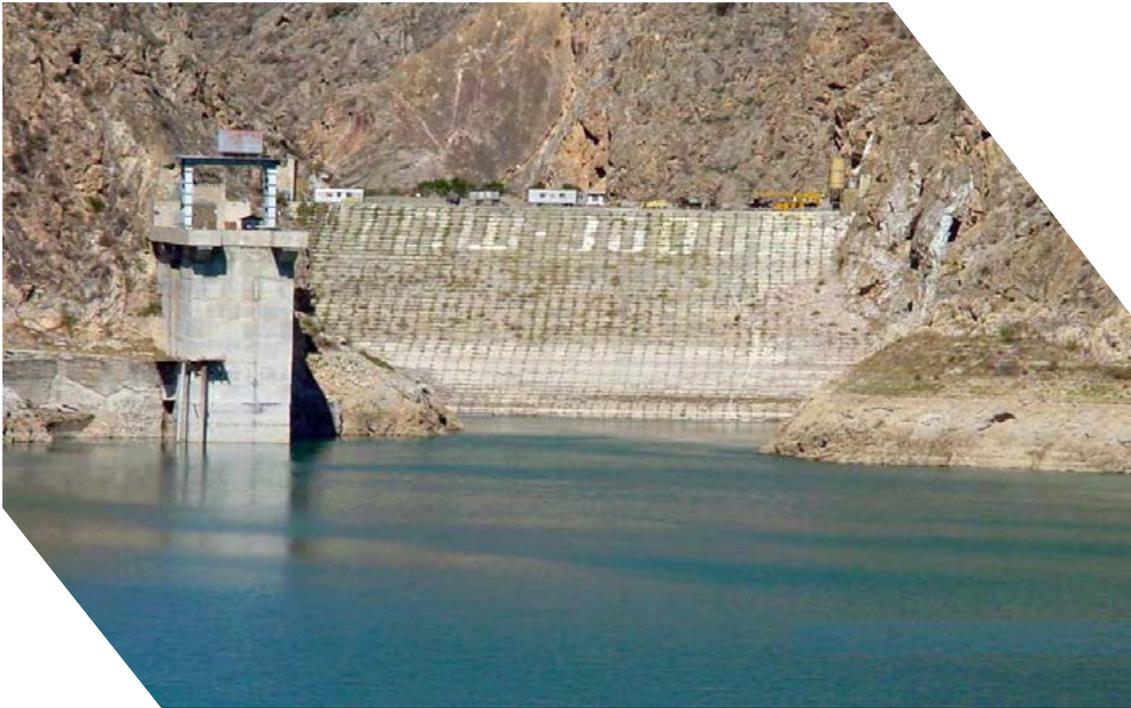






Jayezan Irrigation and Drainage System

Channels capacity:25 m³/s
1st and 2nd grade channels length:45 km
Drainage canals length:21 km
Access roads:59 km
Hydraulics structures:No. 250
Employer:Khuzestan Water and Power Authority
Consultant: Dezab Consulting Engineering Co.



▲
▲
Rehabilitation of Papan Dam
(Kyrgyzstan)

Dam type: Rock-fill with grouted core

Dam height: 9 m

Dam crest length: 250 m

Spillway type: Inclined

Spillway discharge capacity: 180 m³/s

Reservoir volume: 260 million m³

Excavation volume: 850,000 m³

Concrete Casting: 15,000 m³



Completion of Karabura Dam (Kyrgyzstan)

Dam type: Rock-fill with clay core
Crest level: 1200 m (from sea level)
Dam height: 49 m
Dam crest length: 250 m
Reservoir volume: 17 million m³
Spillway type: Gated in the abutment
Total length of tunnels and galleries: 650 m
Employer: Kyrgyzstan Ministry of Agriculture
Consultant: ISC KYRGYZ-SUU-Dolboor

Facilities and Equipment

The design, construction and installation of equipment, and the implementation of hydro mechanical facilities for dams and irrigation and drainage networks, as well as facilities and equipment for hydroelectric plants, pumping stations and water transition systems, are the capabilities of Energy and Water Resources Development Company, implemented in several development projects. Therefore, according to the latest rating by the Plan and Budget Organization, the company has been obtained grade 2 in the field of facilities and equipment.

Selected Projects

1. Zagros Tunnel Water Pumping Stations
2. Zagros Tunnel Power Generation Plants
3. Water pipelines
4. Drilling equipment and cut-off wall of Doyraj Dam
5. Hydro mechanical facilities and equipment of Delvari Dam
6. Gates of Karun IV Reservoir Dam
7. Instrumentation of Karun IV Reservoir Dam



Zagros Tunnel's Generation Plant

Power generation capacity: 8 Megawatt
Number and type of generators: No.6 (cummins) (1400Kw)
Employer: Iran Water & Power
Resources Development Co.
Consultant: Mahab Ghodss Consulting Engineering Co.
Operation place: Kermanshah



Pipe lines-Zagros Tunnel



Hydromechanical equipment of Delvari dam



**Drilling equipment and cut off wall,
related of Shohadaye Moharram
Dam (Doyraj)**



Device type: Hydrofraizs

Length of cut of wall: 1510m

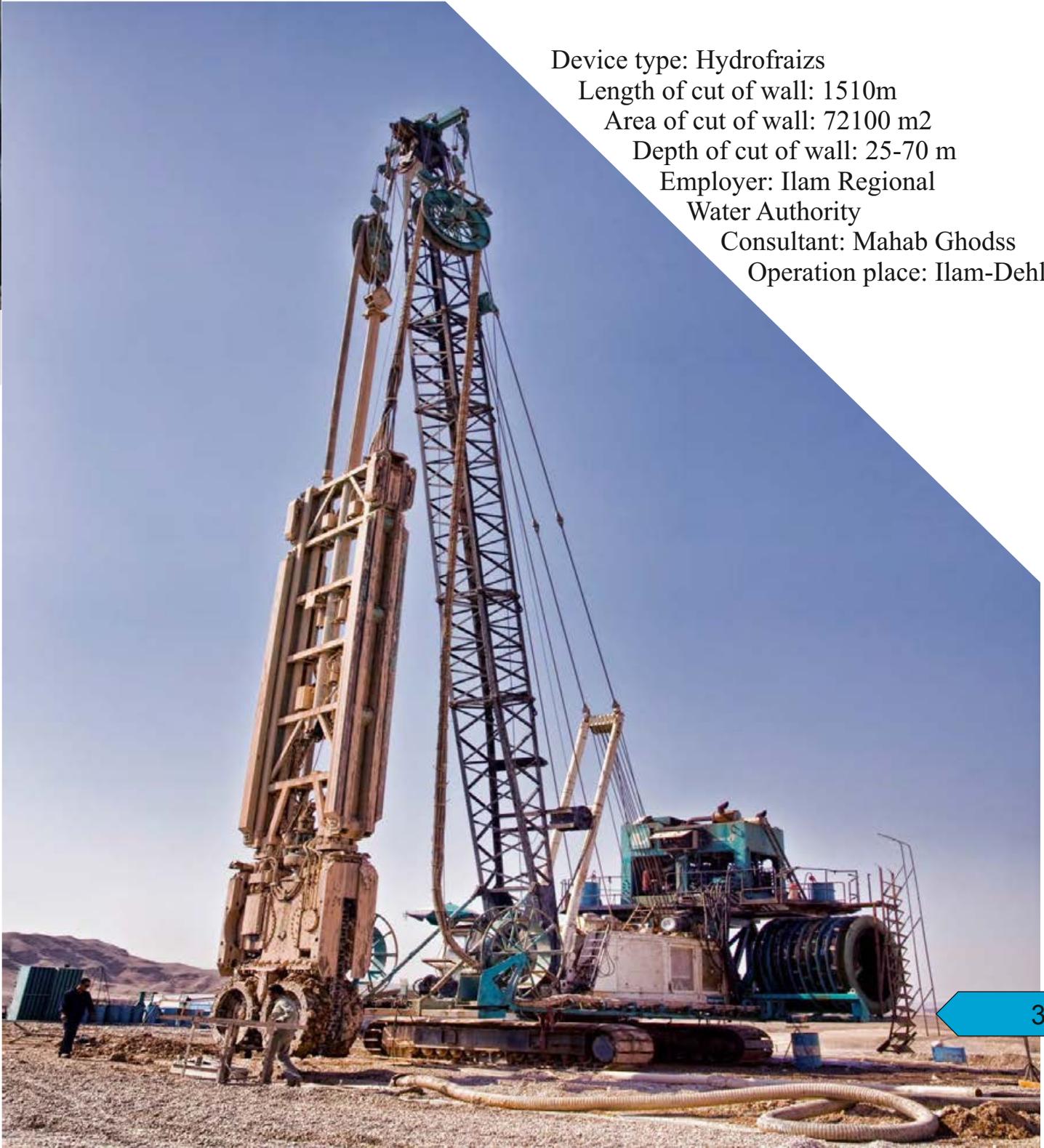
Area of cut of wall: 72100 m²

Depth of cut of wall: 25-70 m

Employer: Ilam Regional
Water Authority

Consultant: Mahab Ghodss

Operation place: Ilam-Dehloran

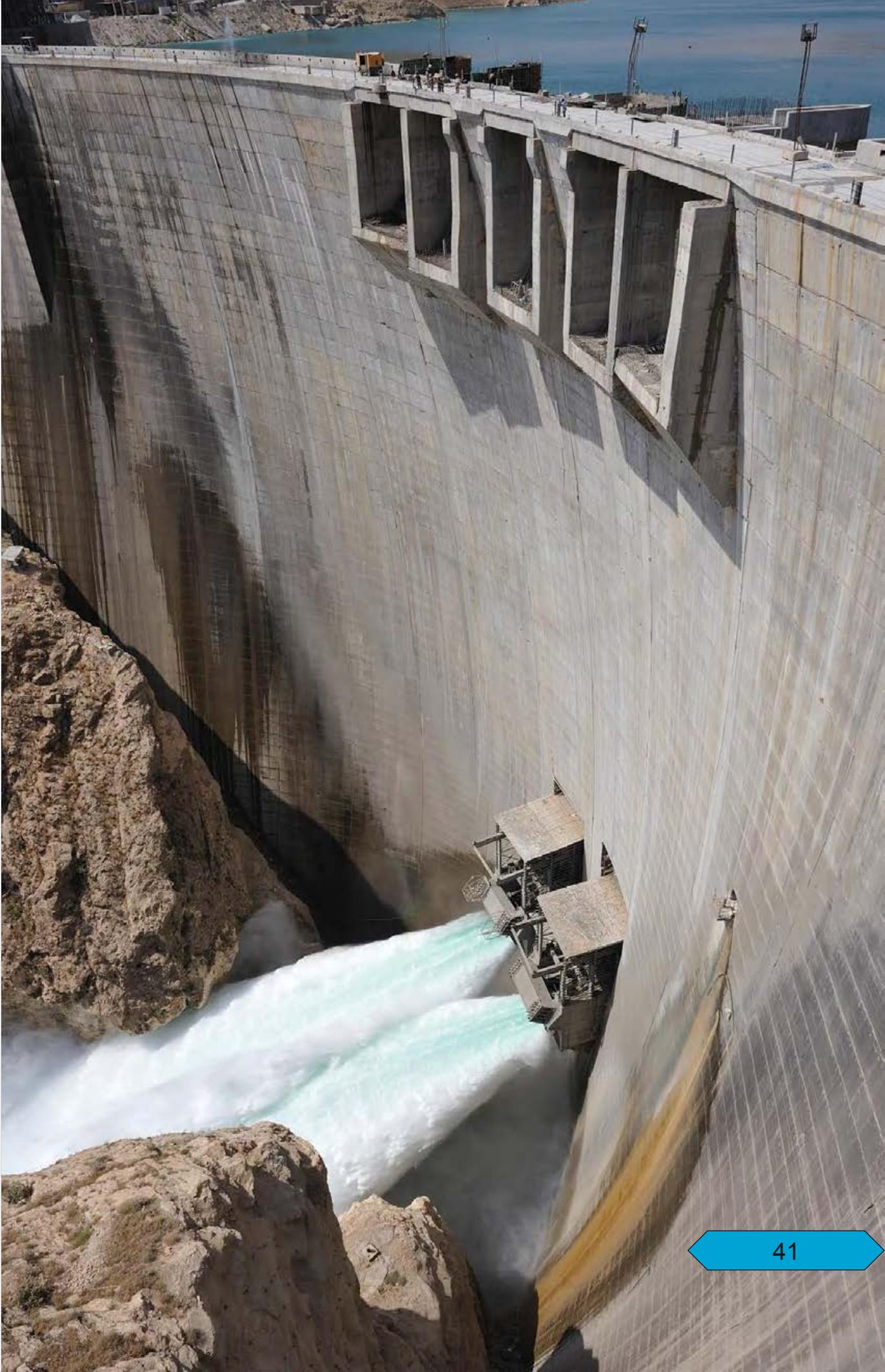




Gates of Karun4 Reservoir Dam ▲▶



▶
Instrumentation
Karun4 Reservoir Dam



Road and Transportation

The first successful experience of Energy & Water Resources Development Company in road project is construction of roads and access tunnels to Marun Reservoir dam in 1987. Utilizing the experience of specialized personnel and their efforts made the company progress in the field of road construction. Other projects such as interurban roads, access routes to construction projects sites and long-distance communication tunnels were implemented by the company. Now, after thirty years, this company has obtained rank 1 in road construction.

Selected Projects of Road and Transportation

Patave to Dehdasht highway
Access road to Zagrous Tunnel
Access road to Karun4 Dam
Open cut of Line 3 of Tehran subway





Access to the Zagros Tunnel



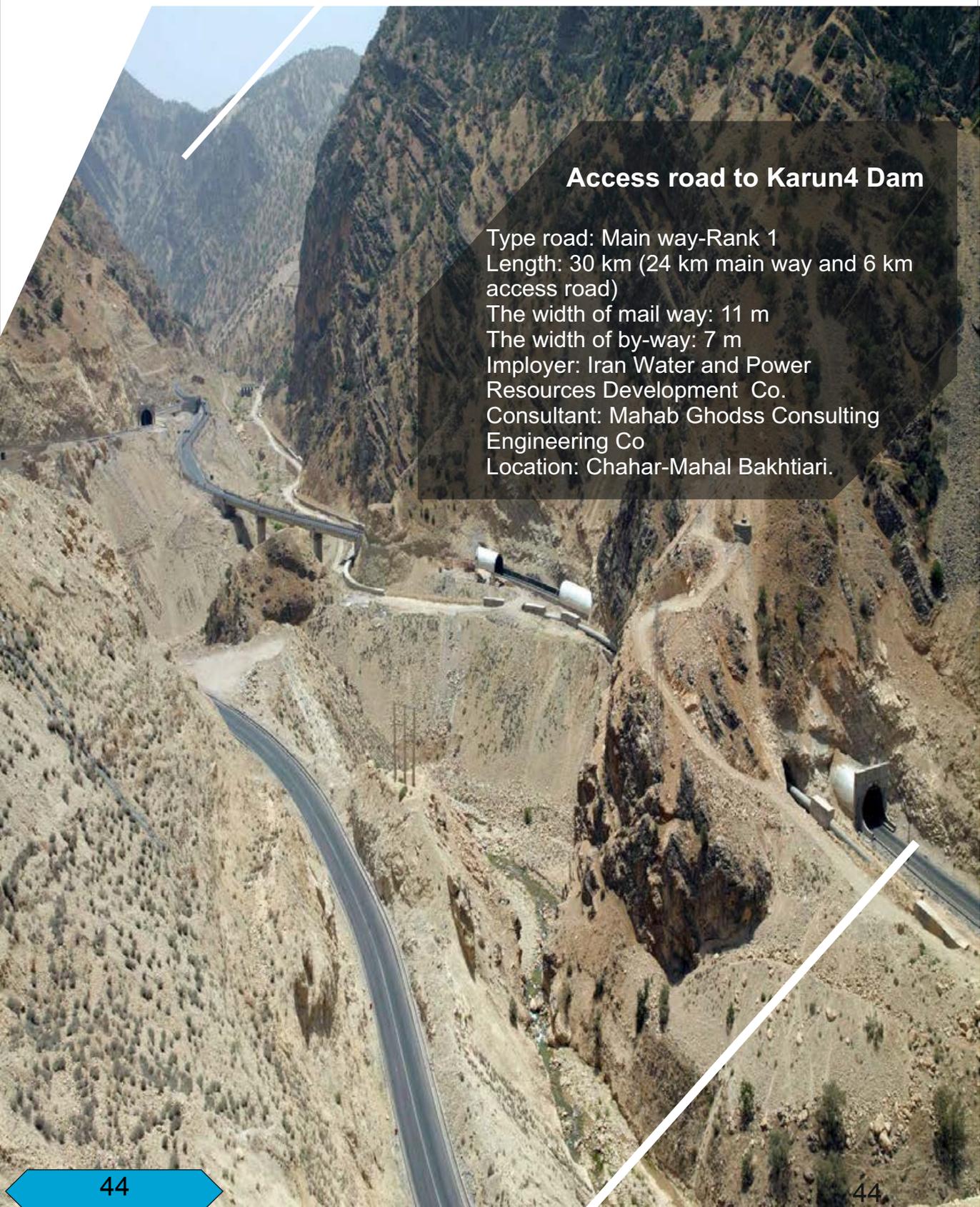
Road type: subsidiary
Width: 6 m
Length: 42 km
Location: Kermanshah
Cosultant: Mahab Ghodss
Consulting Engineering Company
Employer: Iran Water & Power
Resources Development Company

Patave to Dehdasht Highway



Road Type: Graid1 - Main road
Length: 51 km (2 separate part)
Width: 11m
Operation place: Yasuj





Access road to Karun4 Dam

Type road: Main way-Rank 1
Length: 30 km (24 km main way and 6 km access road)
The width of mail way: 11 m
The width of by-way: 7 m
Employer: Iran Water and Power Resources Development Co.
Consultant: Mahab Ghodss Consulting Engineering Co
Location: Chahar-Mahal Bakhtiari.

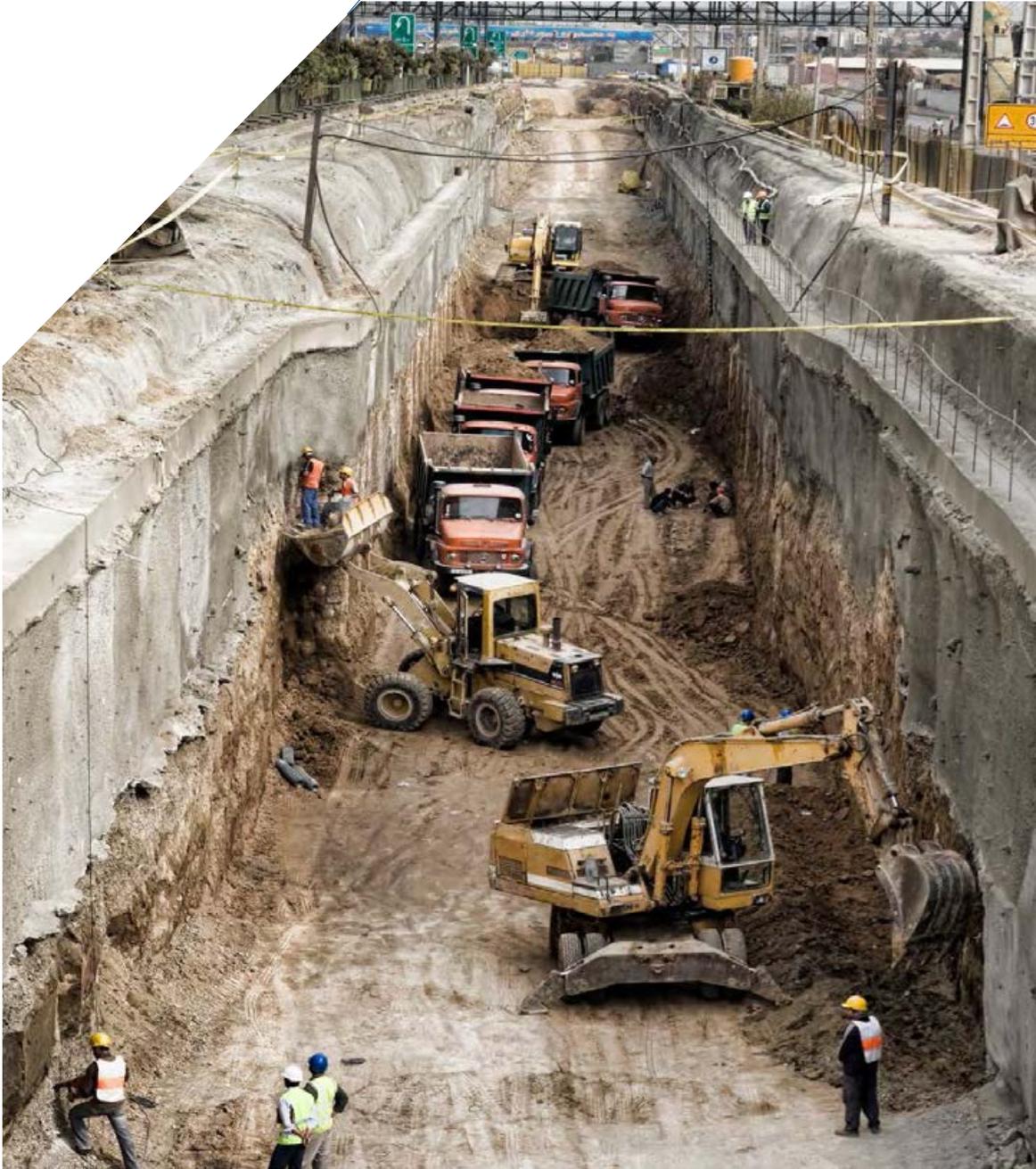
Open Trench Tunnel, Line3-Tehran

Project management: Pajooresh Consulting Engineers

Employer: Tehran Urban & Suburba

Total Length: 2237 m

Railway Operation Co. Operation place: South of Tehran





Construction of underpass at the intersection of Kuhak and Shahid Hamedani highway

Length of the route: 700 meters

Number of piles: 177

Client: Tehran Municipal Department of Housing and Urban Development

Consultant: Gozargah haye Shargh Consulting Engineers Company

Location: Tehran Province





Construction of a Ahar-Tabriz highway

Goijeh Bell pass

Road length: 4 km

Road width: 7 m

Client: East Azerbaijan province Road and Urban Development Office

Consultant: Sena Consulting Engineers

Location: East Azerbaijan Province Ahar



Building

The equipping of large dam construction sites, requires the construction of mobilization camps. Also, the major part of the road, tunnel and subway projects, power plants, irrigation and drainage networks and pumping stations need design and construction of the technical and specialized buildings. Energy and Water Resources Development Company has implemented many projects in the field of construction of residential, official, service and technical buildings, bridges, tunnels, power plants and metro stations.

Building

Subway-Station , Line 3, (A3-3)

Abbaspour 2nd power plant

Marun power plant

Building for Khersun3 dam

Lale Station, Line 1, Tabriz Subway

Construction of a retaining wall and a carriage bridge at Kian Petrochemical Company



▼ **Station A3-3, Line3-Tehran Subway (Azadegan)**

Type of Station: insular

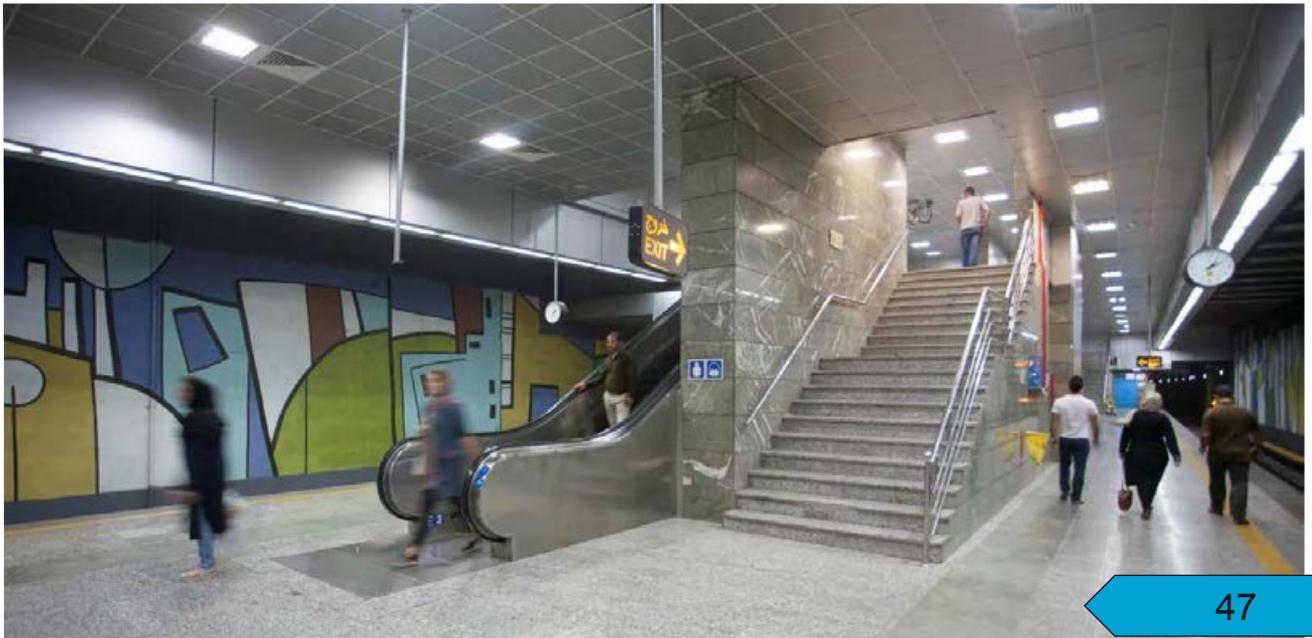
Indoor area: 5276m²

Outdoor area: 2590m²

Number of escalator: 8

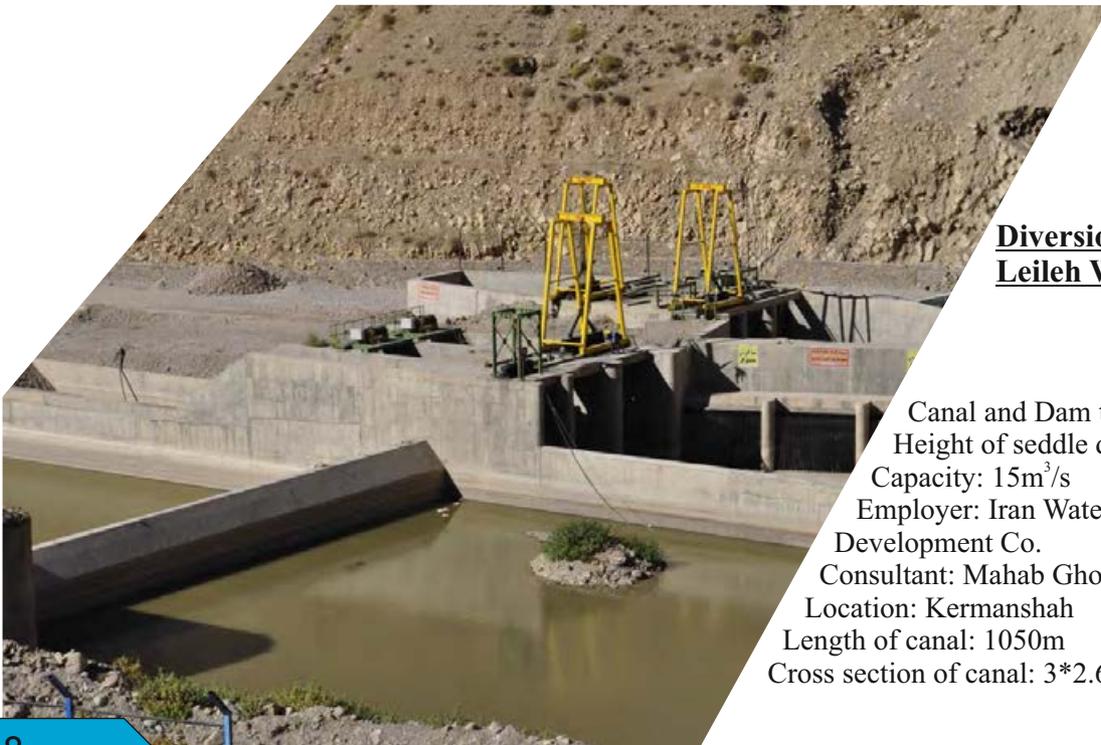
Employer: Tehran Urban & Suburban
Railway Operation Co.

Project Management: Pajoohesh Consulting Engineers
Consultant: Faranegareh Consulting Engineers-Siviar



Construction of an administrative, residential and welfare camp (Khersun3 Dam)

Area: 9280 m²
Employer: Iran Water & Power Resources Development Co.
Consultant: Abanpajouh Consulting Engineers
Location: Chahar-Mahal
Bakhtiari-Lordegan



Diversion saddle Dam and Leileh Water Transition Canal

Canal and Dam type: concrete
Height of saddle dam: 10m
Capacity: 15m³/s
Employer: Iran Water & Power Resources Development Co.
Consultant: Mahab Ghodss
Location: Kermanshah
Length of canal: 1050m
Cross section of canal: 3*2.6m

Tabriz Metro, Laleh Terminal-Line 1

Rail Installation: 10 km
Area of Terminal: 12.65 hectares
Operation place: Tbriz
Building area: 38.5m³



**Construction of Retaining Walls,
Fencing and Guardrails of Kian
Petrochemical Plant**
Steel works: 3200 ton
Concrete Casting: 50.000 m³
Employer: Kian Petrochemical
Consultant: Sazeh Pardazi Iran Co.



Zarshuran Tailings dam

Damn type: Embankment with upstream cover

Dam height: 28m

Crown length: 265m

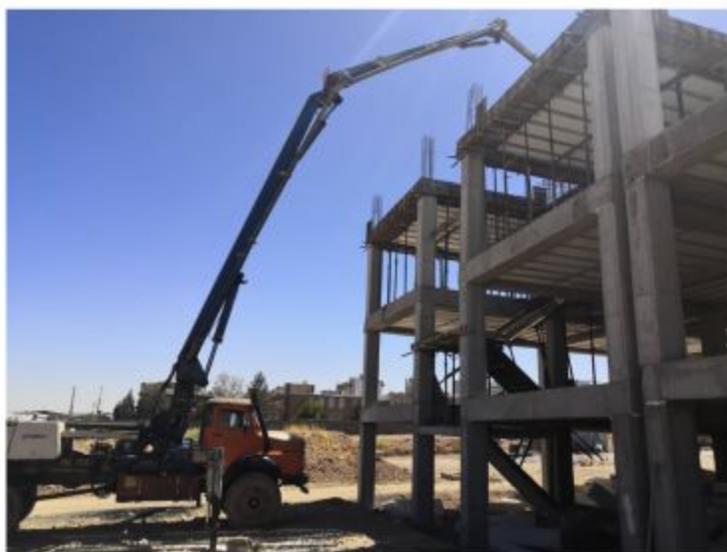
Client: Zarshuran Gold Mine Industrial and Mine Development Company

Consultant: Arkan Padid Consulting Engineering Company

Location: West Azerbaijan Province

Takab town





Construction of 168 residential units in Dolatabad Kermanshah

Phase 3

Project including two executive sections:

First section:

Construction and completion of 168 residential units

12 southern blocks and 9 northern blocks

Each block of 8 residential units with a pilot according to the executive plans

Second section:

Site preparation

Land area: 20317 square metre

Number of buildings: 21 blocks

Client: To see Garan Omran Setad Company

Consultant: Tarj Jame Consulting Engineers

Location: Kermanshah Province





Oil and Gas

The major parts of Energy and Water Resources Development company's brilliant records, relate to the implementation of dams or inter-basin water transmission. With the restraint of most surface water in the past years and the existence of excessive contracting companies, it was necessary for the company to devote a large part of its technical, engineering, operational and investment capability to the oil, gas and energy sector



For this purpose, the creation of a vice investment and market development in the new organizational structure of the company and obtaining the oil and gas rating from the plan and budget organization were two important steps to achieve this goal, which was carried out by the company. The company's long-term programs are to carry out infrastructure projects in the petrochemical sector, and refinery construction



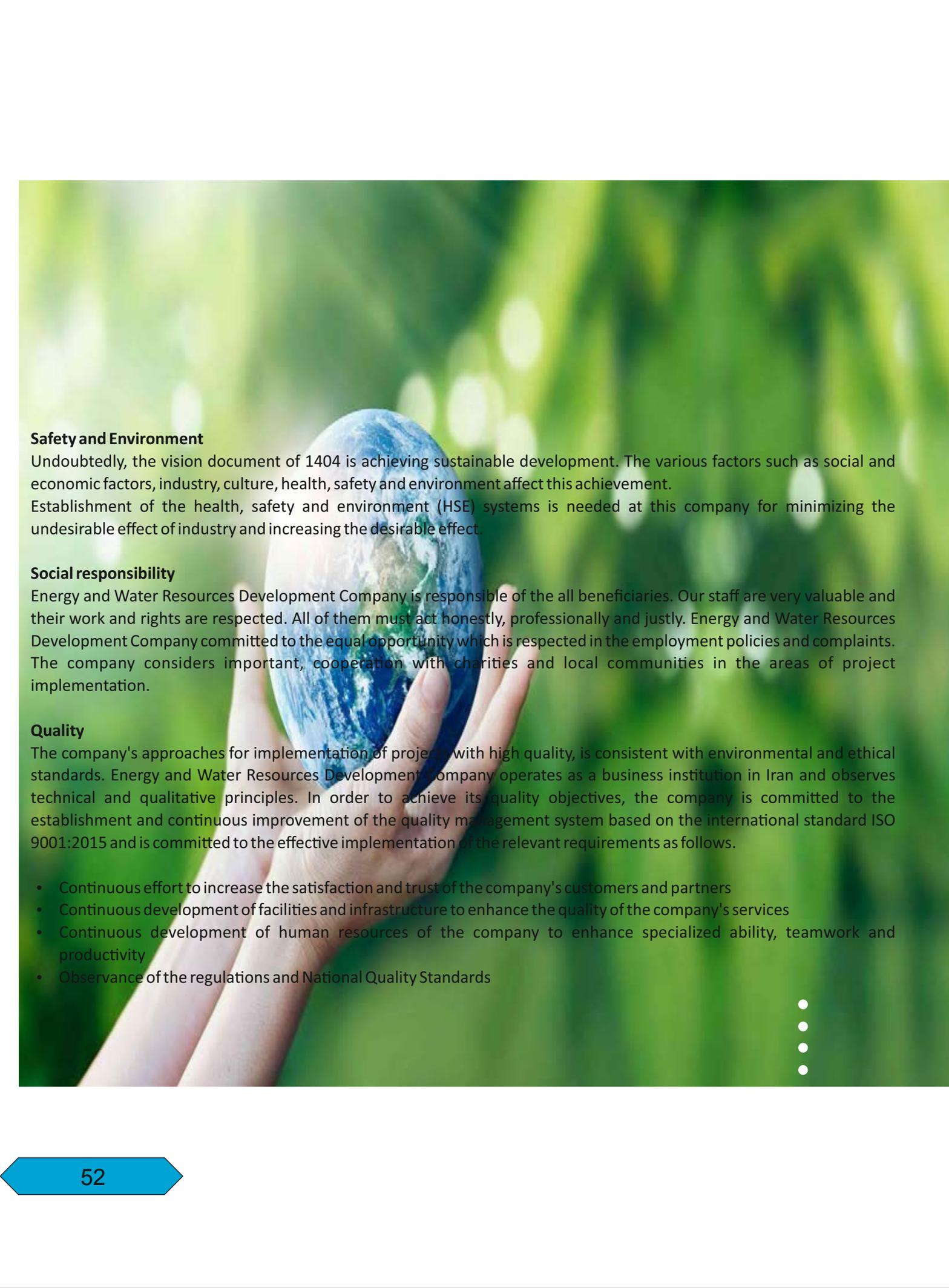
Rough grading of Asalouiyeh Petrochemical road

Excavation: 1,817,468 m³

Concrete casting: 4800m³

Embankment: 821,00 m³





Safety and Environment

Undoubtedly, the vision document of 1404 is achieving sustainable development. The various factors such as social and economic factors, industry, culture, health, safety and environment affect this achievement.

Establishment of the health, safety and environment (HSE) systems is needed at this company for minimizing the undesirable effect of industry and increasing the desirable effect.

Social responsibility

Energy and Water Resources Development Company is responsible of the all beneficiaries. Our staff are very valuable and their work and rights are respected. All of them must act honestly, professionally and justly. Energy and Water Resources Development Company committed to the equal opportunity which is respected in the employment policies and complaints. The company considers important, cooperation with charities and local communities in the areas of project implementation.

Quality

The company's approaches for implementation of projects with high quality, is consistent with environmental and ethical standards. Energy and Water Resources Development Company operates as a business institution in Iran and observes technical and qualitative principles. In order to achieve its quality objectives, the company is committed to the establishment and continuous improvement of the quality management system based on the international standard ISO 9001:2015 and is committed to the effective implementation of the relevant requirements as follows.

- Continuous effort to increase the satisfaction and trust of the company's customers and partners
- Continuous development of facilities and infrastructure to enhance the quality of the company's services
- Continuous development of human resources of the company to enhance specialized ability, teamwork and productivity
- Observance of the regulations and National Quality Standards





Quality Policy

Energy and Water Resources Development Company as a contraction company in the field of implementing various industrial and development projects, has chosen the integrated management system based on ISO9001:2015, ISO14001:2015, OHSAS18001:2007 standards in order to satisfy its customers as much as possible.

In this system, increasing the management capacity in timely execution of projects in accordance with the requirements mentioned in contracts, is one of the key factors in achieving customer (employer) satisfaction.

While expressing my commitment to meet the requirements of the principles of the contract, I would like to encourage all the personnel to do this, and introduce the following elements as a framework for achieving the quality objectives of the organization.

- Development of organizational, managerial and executive capabilities for implementation of civil and industrial projects with an emphasis on oil and gas projects, investment and development of the company's market.
- Efforts to increase customers' satisfaction, improve quality and improve the integrated management system by identifying, implementing and controlling processes, and setting the appropriate organizational goals.
- Identifying, updating and upgrading resources to provide services and equipment, with an emphasis on internal resources
- Increasing the knowledge and skills of employees and promoting quality culture at different levels of the organization
- Developing infrastructure and deploying IT requirements for timely use of accurate information for timely and appropriate analysis and decision making.
- Environmental pollution prevention in the implementation of construction and industrial projects, in accordance with the requirements of the relevant organizations.
- Commitment to maintaining employee health and reducing human resources incidents by identifying, assessing, monitoring and targeting occupational hazards to reduce the risk of implementing industrial and civil projects.
- Understanding and implementing this policy and deploying an integrated management system is a responsibility of the colleagues and the monitoring and reporting is the responsibility of the management representative. I monitor the implementation, efficiency and effectiveness of this policy and integrated management system at certain intervals.

Chief Executive Officer



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