

### Power Industry Projects

Row	Name of Project		
1	TREC Power transmissions and sub transm	ission lines and substations	
2	Power plants increase efficiency (Via buyback and repowering method)		
3	High efficiency combined cycle power plan	ts development	
4	Development of Small Scale DG & CHP		
5	Renewable energy		

### SUM





Number	Amount (USD Billion)
396 Substations & 450 KM , High voltage Cable	3.13
13356 MW	9.261
5936 MW	3.8
3000 MW	2
3000 MW	5.78
	23.97

#### 1- Power Transmission and sub-Transmission substations

Name of Project	Set	Credit (US\$ Billion)
400 KV Substations	35	1.2
230 KV Substations	49	1.3
132 KV Substations	85	1.4
63 KV Substations	227	1.4
Tehran City (63 KV cable)	450 KM	0.5
Sum		~ 3.13

	Project name	Quantity
1	Buying equipment for Transmission Substations	Q.4 Culpatentiana
	(Under the Supervision of the IPDC)	84 Substations

<sup>\*</sup> www.IPDC.ir

### 1.1-400 KV Sub-station Projects for Investment

	Target Regional Power Company	Ratio(KV)	Quantity * Capacity (MVA)
1	Azarbaijan(6), Zanjan(2), Gharb(2), Fars(2), Kerman(2), Mazandran(2)	400/230	16* 315
2	Tehran(4)	400/230	4 * 500
3	Tehran(2)	400/230	2 * 200
4	Azarbayjan(2), Khorasan(10), Khuzestan(12), Fars(2), Kerman(4),	400/132	32 * 200
230 KV	Halppapan(2) Projects For Investme	ent 400/66	10 * 200
6	Tehran(2), Mazandaran(2), Yazd(2), Bakhtar(2)	400/63	8 * 200

### 1.2 - 230 KV Sub-station Projects for Investment

	Target Regional Power Company	Ratio(KV)	Quantity * Capacity (MVA)
1	Azarbaijan(6), Kerman(2)	230/132	8 * 160
2	Fars(14)	230/66	14 * 160
	Fars(2), Sistan& Baluchestan(4),	230/20	6 * 50
3	Tehran(2)	230/63	2 * 250
4	Tehran(8), Mazandaran(4)	230/63	12 * 180
	Bakhtar(6), Tehran(2), Zanjan(2),		
5	Gharb(2), Gilan(2), Hormozgan(14),	230/63	30 * 160
	Yazd(2)		
6	Tehran(2), Sistan& Baluchestan(16),	230/63	24 * 125
O	Gilan(4)	230/03	24 125
	Khuzestan(2)	230/33	2 * 50

	Project name	Quantity
	Investment in buying equipment of	312 Substations
2	the Sub Transmission Substations And Sub-transmission Lines (Under the Supervision of the TREC*)	450 Km lines

<sup>\*</sup> Tehran Regional Electric Company

### 1.3- 132 KV Sub-station Projects for Investment

	Target Regional Power Company	Ratio(KV)	Quantity * Capacity (MVA)
1	Azarbaijan(20), Kerman(2), Hormozgan(4), Yazd (2), Fars (18)	132/20	46 * 50
2	Azarbaijan(6), Kerman(4), Kho-rasan(42), Gharb (2)	132/20	54 * 40
3	Khuzestan (70)	132/33	70 * 50

### 1.4 -66 & 63 KV Sub-station Projects for Investment

	Target Regional Power Company	Ratio(KV)	Quantity * Capacity (MVA)
1	Fars (108)	66/20	108 * 40
3	Isfahan (26), Bakhtar(26), Tehran[180, including 70 GIS], Semnan (14), Gilan(8), Mazandaran (20), Hormozgan(10),	63/20	284 * 40
4	Azarbaijan (8), Zanjan [10, including 4 GIS], Sistan& Baluchestan(20), Gharb (8), Kerman (12), Gilan(4),	63/20	62 * 30

#### Azarbayjan regional Electrical Company



- a)  $400/230~{\rm KV}~2*315~{\rm MVA}$  Sahand Power Plant Substation
- b)  $400/230~{\rm KV}~2*315~{\rm MVA}$  Haris Power Plant Substation
- c) 400/230 KV 2\*315 MVA Sabalan Power Plant Substation
- d)  $400/132~\mathrm{KV}~2*200~\mathrm{MVA}$  Hashtrood Substation

### Bakhtar regional Electrical Company



a)400/230 KV 2\*315 MVA Khomain Substation

### Tehran regional Electrical Company



- a) 400/230 KV 2\*500 MVA Tehranpars Substation
- b)  $400/230~{\rm KV}~2*500~{\rm MVA}~{\rm Dar}~{\rm Abad}~{\rm Substation}$
- c)  $400/63~\mathrm{KV}~2^*200~\mathrm{MVA}$  Baghestan Substation

#### Khorasan regional Electrical Company



- a) 400/132 KV 2\*200 MVA Kohsangi Substation
- b)  $400/132~\mathrm{KV}~2^*200~\mathrm{MVA}$  Bojnord Substation
- c) 400/132 KV 2\*200 MVA Doulat Abad Substation
- d) 400/132 KV 2\*200 MVA Binaloud Substation
- e)  $400/132~\mathrm{KV}~2*200~\mathrm{MVA}~\mathrm{Emam}~\mathrm{Reza}~\mathrm{Substation}$

#### Khozestan regional Electrical Company



- a) 400/132 KV 2\*200 MVA Pirozan Substation
- b)  $400/132~\mathrm{KV}~2*200~\mathrm{MVA}$  isar Substation
- c)  $400/132 \; \text{KV} \; 2*200 \; \text{MVA}$  parsomash Substation
- d)  $400/132~\mathrm{KV}~2*200~\mathrm{MVA}$  Jondi Shapour Substation
- e)  $400/132~\mathrm{KV}~2^*200~\mathrm{MVA}$  Shahid Baghai Substation
- f)  $400/132~\mathrm{KV}~2^*200~\mathrm{MVA}$  Monfared Niaki Substation

### Zanjan regional Electrical Company



a) 400/230 KV 2\*315 MVA Takestan Substation

# Development of Small Scale DG & CHPGharb regional Electrical Company



a)  $400/230~{\rm KV}~2*315~{\rm MVA}$  Sanandaj Substation

### Development of Small Scale DG & CHPFars regional Electrical Company



- a) 400/230 KV 2\*315 MVA Marv Dasht Substation
- b) 400/132 KV 2\*200 MVA Khormoj Substation
- c) 400/66 KV 2\*200 MVA Marv Dasht Substation
- d) 400/66 KV 2\*200 MVA Sarhad Substation
- e) 400/66 KV 2\*200 MVA Dehbid Substation
- f) 400/66 KV 2\*200 MVA Darab Substation
- g)  $400/66~\mathrm{KV}~2^*200~\mathrm{MVA}$  Kharameh Substation

### Kerman regional Electrical Company



- a) 400/230~KV~2\*315~MVA Kahnooj Substation
- b)  $400/132~\mathrm{KV}~2^*200~\mathrm{MVA}~\mathrm{Khaton}~\mathrm{Abad}~\mathrm{Substation}$
- c) 400/132 KV 2\*200 MVA Jiroft Substation

### Mazandaran regional Electrical Company



- a) 400/230 KV 2\*315 MVA Markaz Mazandaran Substation
- b) 400/63 KV 2\*200 MVA Gorgan Substation

## Hormozgan regional Electrical Company

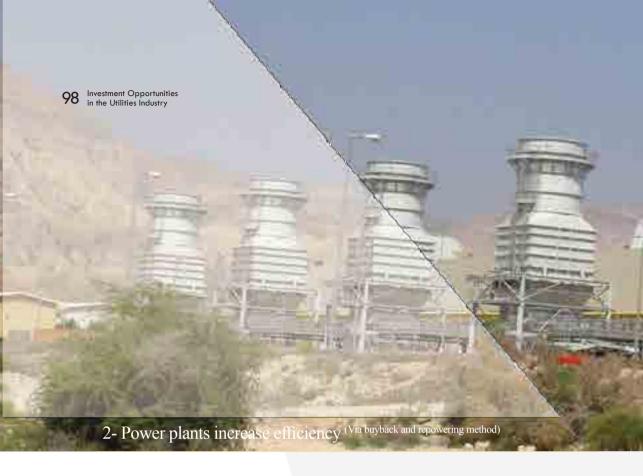


a) 400/132 KV 2\*200 MVA Haji Abad Substation

### Yazd regional Electrical Company



a) 400/63 KV 2\*200 MVA Mehriz Substation



#### Outline of a buyback contract

To stimulate private sector investment in the infrastructural water and power plans and projects and to have this sector further engaged in the abovementioned area we need to prepare relevant desirable projects. Therefore the Iranian law permits this opportunity to foreign companies, involvement in projects through Buyback contracts.

Ministry of Energy introduces some projects under buyback contract. Iran's power industry requires investments of USD 24 billion in the short and medium time.

Iran would like to interest international power and energy companies in investing in Iran's power business by offering buyback contracts. Under abuyback contract an international company invests and when production starts, the field is handed over to the ministry of energy orone of its representatives.

According to the Iranian government, the buybackcontract contains sufficient incentives for international companies to invest in Iran.

#### Outline of Repowering Projects

Due to the rapid increase of power consumption in Iran, older power plants cannot be taken offline. Therefore in addition to building new power plants, repowering older power plants by eliminating the old boiler systems and coupling them with gas turbines or by using heat recovery steam generators, is a suitable course of action. As one of the more important investment areas in Iranian power industry, 19 power plants have been preselected for optimization using one of the mentioned methods.

#### **General Information**

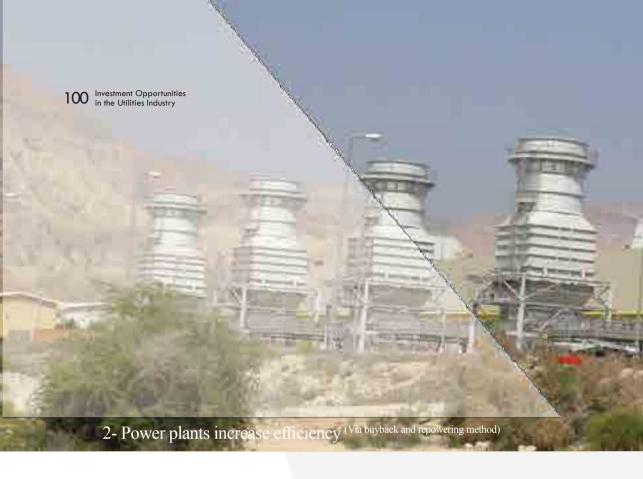
#### Foreign Investment Promotion and Protection Act (FIPPA):

- No restriction on the percentage of foreign shareholding.
- The volume of foreign investment in each individual case shall not be subject the any limitation.
- (and 4) repatriation of principal capital and profits is permissible.
- No restriction of the kind of acceptable investment.
- Facilitation of foreign investors entrance and residency.
- Coverage of non-commercial risks.
- Shortening the admission process and issuance of foreign investment license.
- Admittance of foreign governmental companies.
- Compensation of losses caused by expropriation and nationalization.
- Possibility of investment by Iranian investors using foreign originated capital, instead of foreigners.
- Possibility of referring disputes international arbitration.
- Foreign investors, (who have already invested in Iran, may benefit from "FIP- PA" coverage for the principal investment already made.

#### Other facilities

#### Taxes (duties) exemption

oUp the 80% for 4 years. o(In less developed areas) 100% for 10 years. oExporting 100% without limitations.



#### 2-1- Chabahar Power Plant

Project Location (site) & Images: 15th kilometer of Chabahar-Iranshahr Rd ,Chabahar , Sistan and Baluchestan Province , Islamic Republic of Iran Type of Contract: Buyback Plant

#### **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which per-





#### formed

- Preparation of fuel for operation period which performed (Costs will be paid by government)
- The ability of connection to the network through the power plant substation

#### Project Time Schedule (Period of Preparation, Construction & Operation):

- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.

Return of capital period : Up to 2 years

#### Feasibility Study:

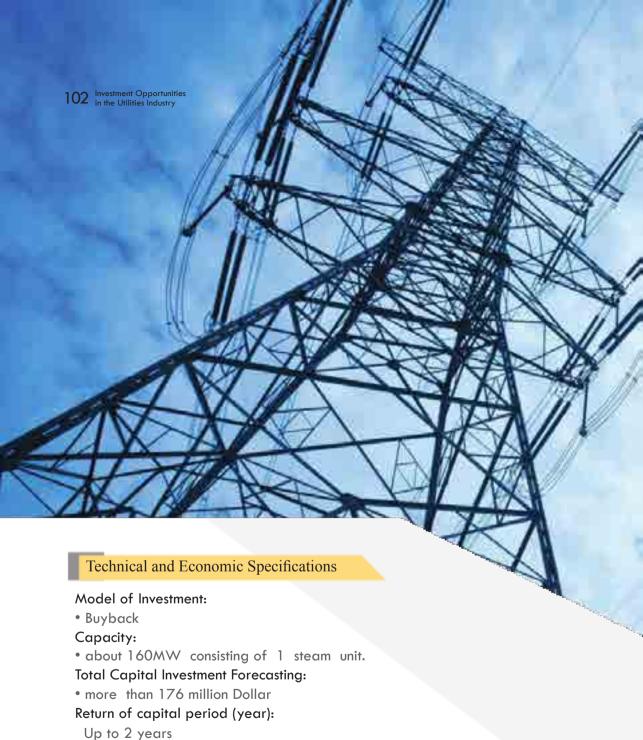
• feasibility studies by investor

#### Position of Land Ownership:

• Is owned by the private investor. Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):



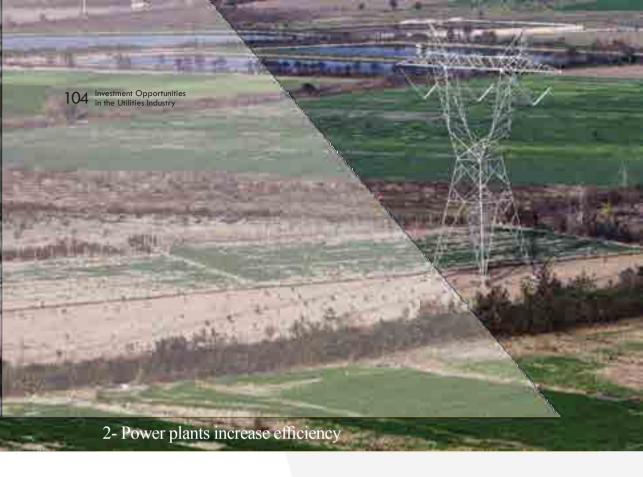
• Obtain the required environmental permit



Net Present Value (NPV) - million Rials:

• International Rate of Return (IRR) %: 12 percent





#### 2.2- Golestan (Aliabad) Power Plant

Project Location (site) & Images: Near the city of Aliabad-e-Katul , Golestan Province , Islamic Republic of Iran
Type of Contract: Buyback

#### **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which per- formed
- Preparation of fuel for opera-

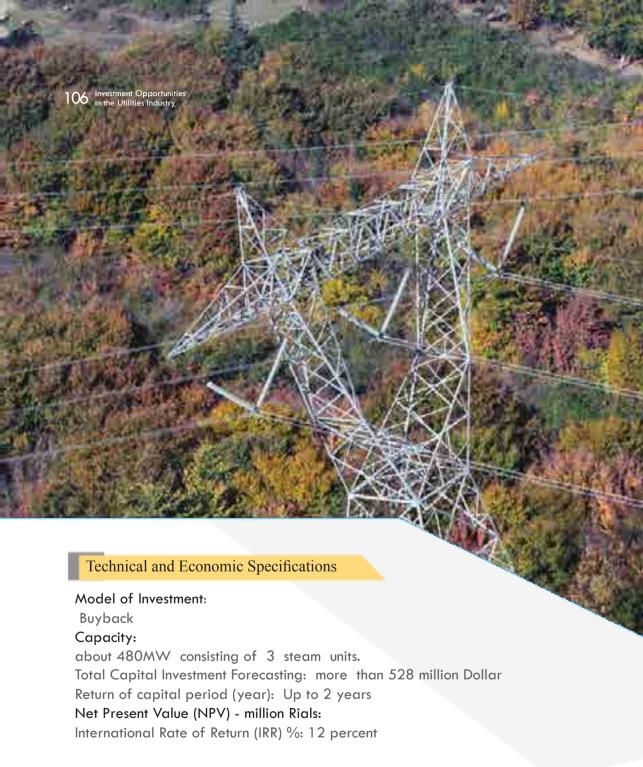




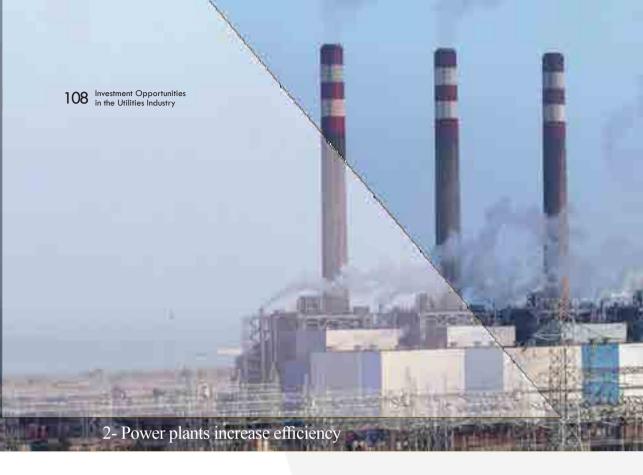
tion period which performed (Costs will be paid by government)

- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years. Site Preparation: Feasibility Study:
- feasibility studies by investor
   Position of Land Ownership: Is owned
   by the private investor.
   Legal Permissions (License of
   Constriction, Foreign currency guota,
   environmental assessment, ect.):
- Obtain the required environmental permit and permit for water









#### 2.3- Hafez Power Plant

Project Location (site) & Images:

 $1\,6\text{th}$  kilometer of Shiraz-Fasa Rd , Fars Province , Islamic Republic of Iran

Type of Contract:

Buyback

#### **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for con- struct period which performed
- Preparation of fuel for operation peri-





od which performed (Costs will be paid by government)

- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years.

Site Preparation:

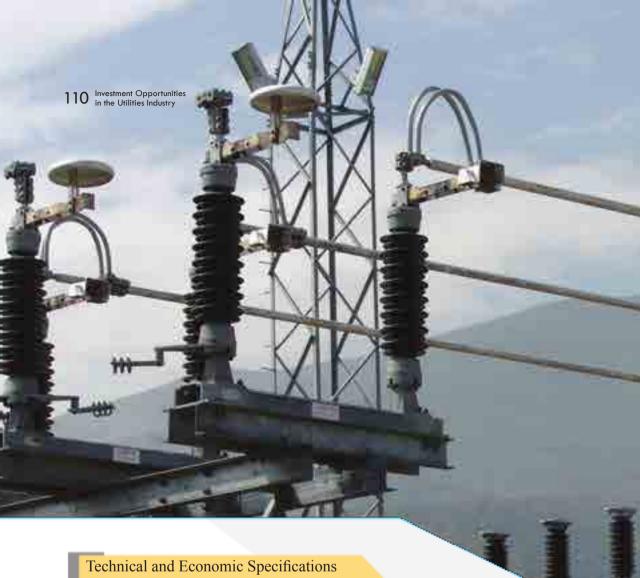
Feasibility Study:

feasibility studies by IPDC
 Position of Land Ownership: Is owned by the IPDC.

Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):

- Environmental permit has been obtained.
- Water permit has been obtained.





#### Model of Investment:

Buyback

#### Capacity:

about 480MW consisting of the 3 steam units.

Total Capital Investment Forecasting: more than 528 million Dollar

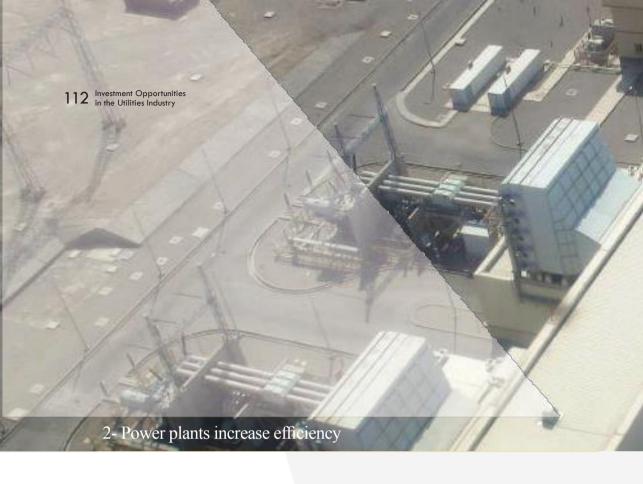
#### Return of capital period (year):

Up to 2 years

Net Present Value (NPV) - million Rials:

International Rate of Return (IRR) %: 12 percent





#### 2.4- Hormozgan Power Plant

Project Location (site) & Images:

 $25\ \rm km$  north of Bandar Abbas, Hormozgan Province , Islamic Republic of Iran Type of Contract:

Buyback

#### **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation





period which performed (Costs will be paid by government)

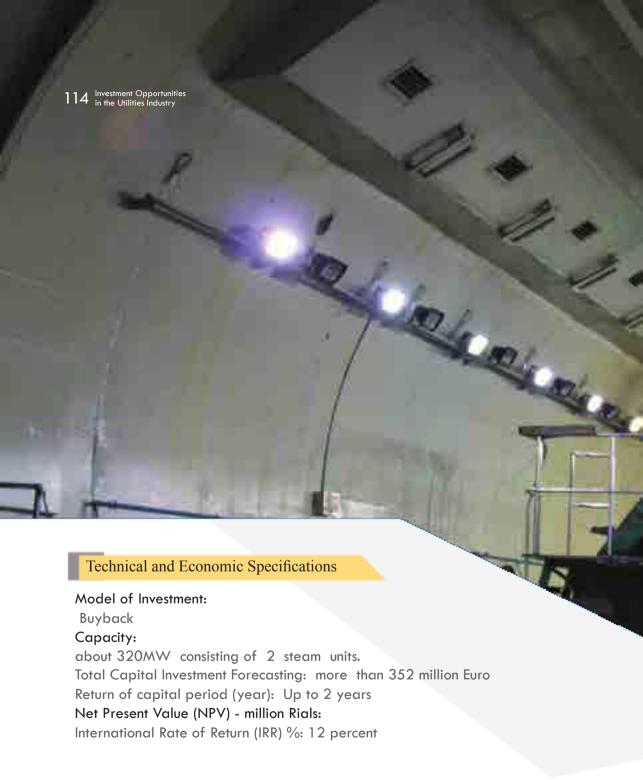
- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years. Site Preparation:

Feasibility Study:

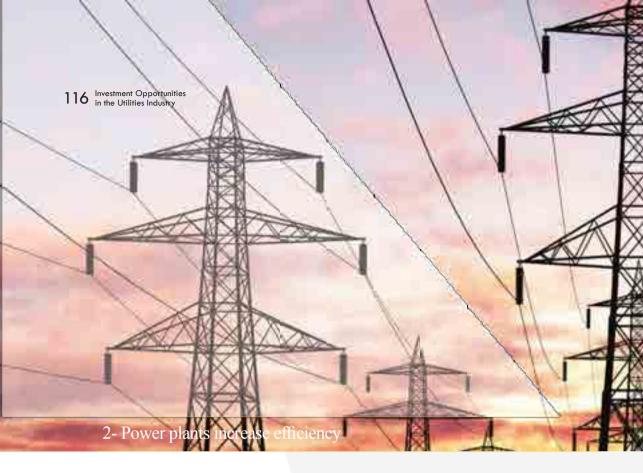
- feasibility studies by IPDC
   Position of Land Ownership: Is owned by the IPDC.
   Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):
- Environmental permit has been ob-tained.



 water supply contract was signed in the gas section , but there is not enough water .







## 2.5- Iranshahr Power Plant

Project Location (site) & Images:

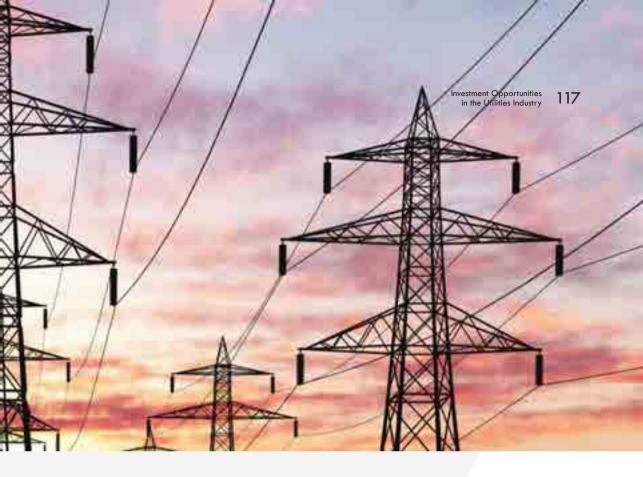
5th kilometer of Iranshahr-Bampour Rd , Sistan and Baluchestan Province , Islamic Republic of Iran Type of Contract:

Buyback

## **Project Status**

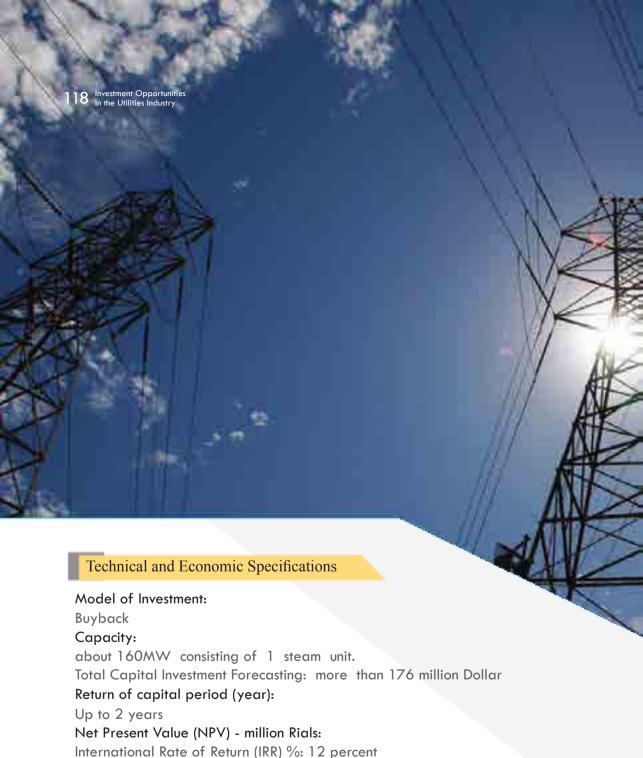
- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for con- struct period which performed
- Preparation of fuel for operation peri





- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years. Site Preparation:
- Land ready for delivery Feasibility Study:
- feasibility studies by IPDC
   Position of Land Ownership: Is owned by the IPDC.
   Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):
- correspondence necessary to permit the water supply is done.









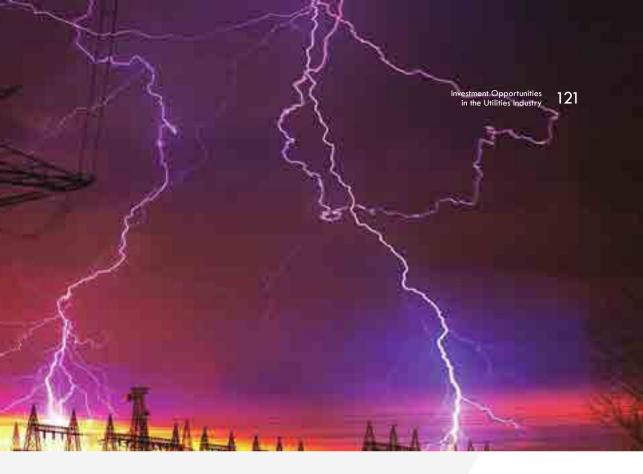
## 2.6- Kashan Power Plant

Project Location (site) & Images: 20th kilometer of Kashan-Ardestan Rd , Isfahan Province , Islamic Republic of Iran Type of Contract: Buyback

# **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation





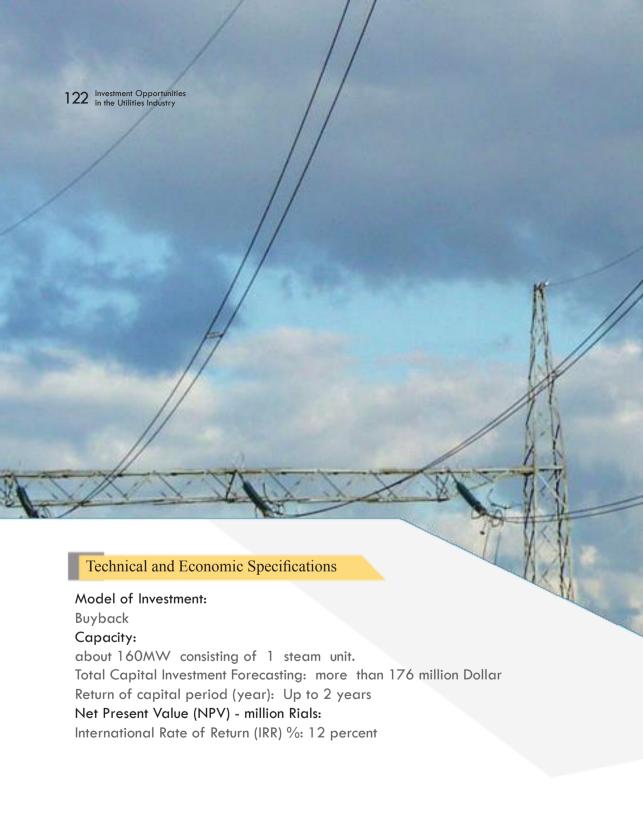
• The ability of connection to the network through the power plant substation
Project Time Schedule (Period of Preparation, Construction & Operation):

- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years.

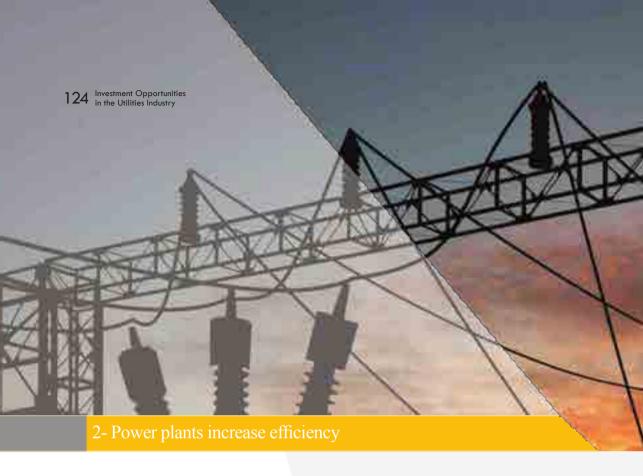
Site Preparation: Feasibility Study:

• feasibility studies by investor Position of Land Ownership: Is owned by the private investor.









## 2.7- Khaleej Fars Power Plant

### Project Location (site) & Images:

At distance of  $45~\rm km$  northeast of Bandar Abbas and 11 km of Sarkhoon gas field, Hormozgan Province , Islamic Republic of Iran

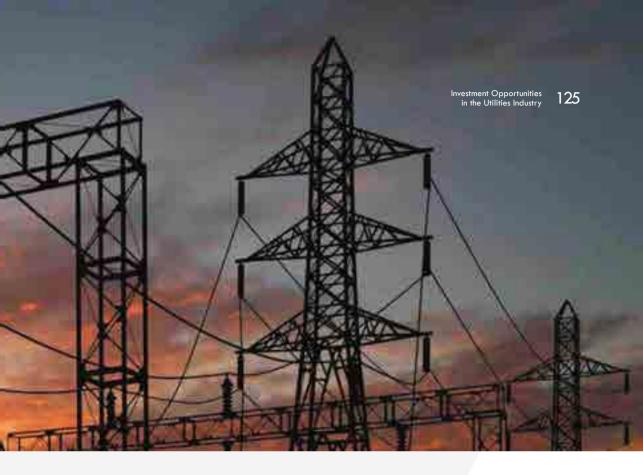
### Type of Contract:

Buyback

# **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation





- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years.

Site Preparation:

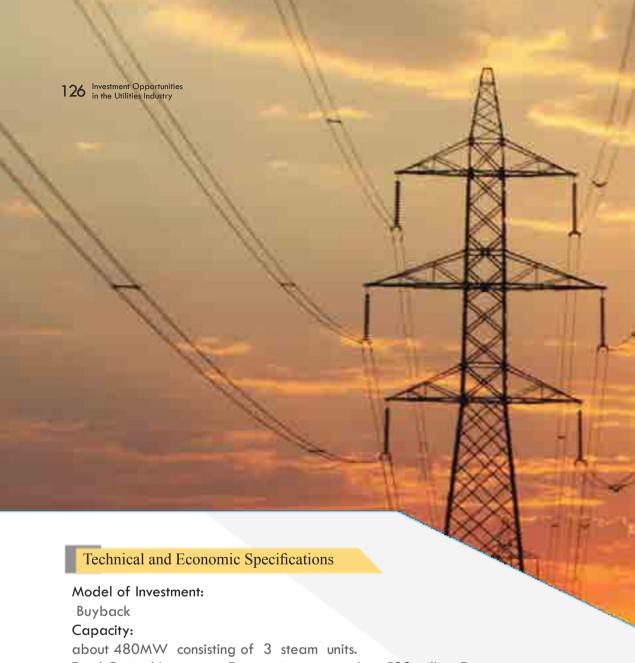
Feasibility Study:

feasibility studies by IPDC
 Position of Land Ownership: Is owned
 by the IPDC.

Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):

 Regional Water agrees to sell water and declared under tariff





Total Capital Investment Forecasting: more than 528 million Euro Return of capital period (year):

Up to 2 years

Net Present Value (NPV) - million Rials:

International Rate of Return (IRR) %: 12 percent





## 2.8- Mahshahr Power Plant

#### Project Location (site) & Images:

9th kilometer of Petrochemical-Chamran Rd, Mahshahr , Khuzestan Province , Islamic Republic of Iran

### Type of Contract:

Buyback

## **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period





- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years.

Site Preparation:

Feasibility Study:

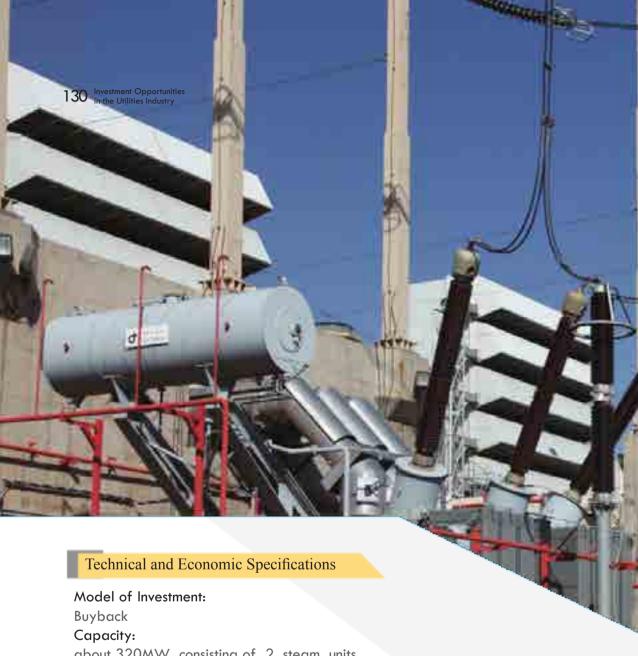
feasibility studies by IPDC
 Position of Land Ownership: Is owned
 by the IPDC.

Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):

• Environmental permit has been obtained.



• required water is supplied by the gas section.



about 320MW consisting of 2 steam units.

Total Capital Investment Forecasting: more than 352 million Dollar

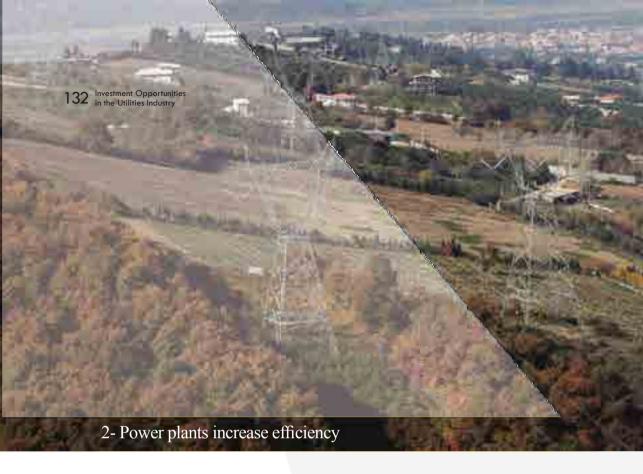
Return of capital period (year):

Up to 2 years

Net Present Value (NPV) - million Rials:

International Rate of Return (IRR) %: 12 percent





### 2.9- Parand Power Plant

Project Location (site) & Images:

 $30 th\ kilometer\ of\ Tehran-Saveh\ Highway\ ,\ Tehran\ Province\ ,\ Islamic\ Republic\ of\ Iran\ Type\ of\ Contract:$ 

Buyback

## **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period





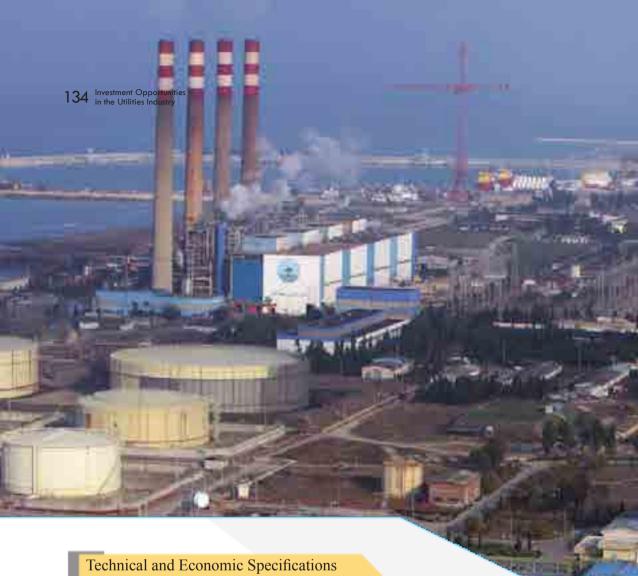
- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years. Site Preparation:
- 11%

Feasibility Study:

- feasibility studies by investor
   Position of Land Ownership: Is owned by the private investor.
   Legal Permissions (License of Constriction, Foreign currency guota,
- Obtain the required environmental permit and permit for water

environmental assessment, ect.):





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Model of Investment:

Buyback

#### Capacity:

about 480 MW consisting of 3 steam units.

Total Capital Investment Forecasting: more than 528 million Dollar

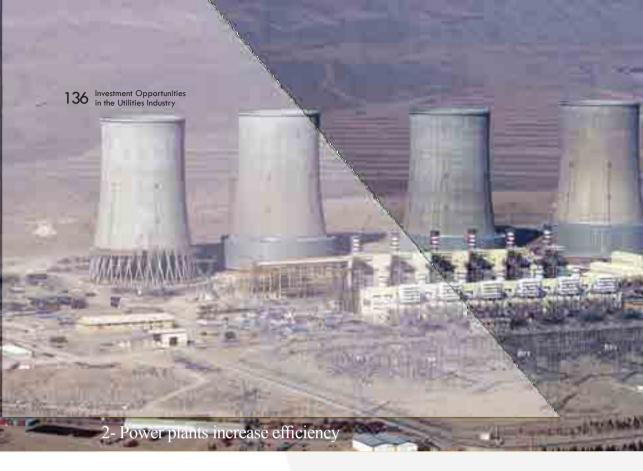
Return of capital period (year):

Up to 2 years

Net Present Value (NPV) - million Rials:

International Rate of Return (IRR) %: 12 percent





### 2.10- Rudeshur Power Plant

Project Location (site) & Images:

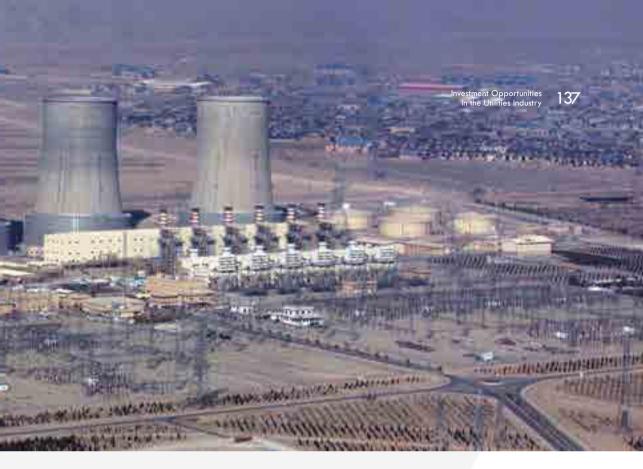
44th kilometer of Tehran-Saveh Fwy , Markazi Province, Islamic Republic of Iran Type of Contract:

Buyback

# **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period





- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years. Site Preparation:
- 3%

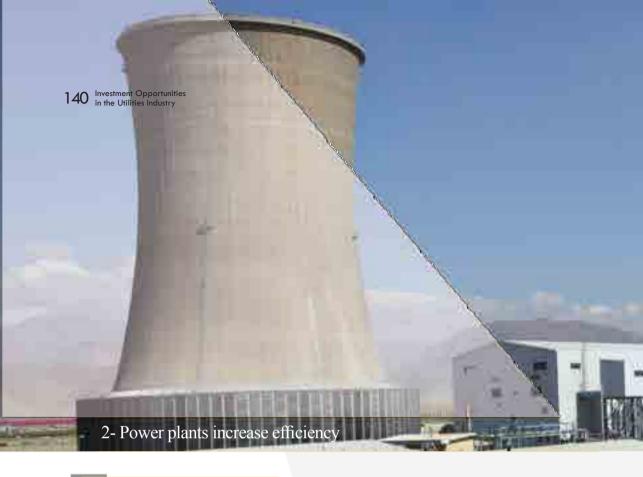
Feasibility Study:

- feasibility studies by investor
  Position of Land Ownership: Is owned
  by the private investor.
  Legal Permissions (License of
  Constriction, Foreign currency guota,
  environmental assessment, ect.):
- Obtain the required environmental permit and permit for water









## 2.11- Sabalan Power Plant

Project Location (site) & Images:

30th kilometer of Ardabil-

Meshgin shahr Rd , Ardabil Province , Islamic Republic of Iran

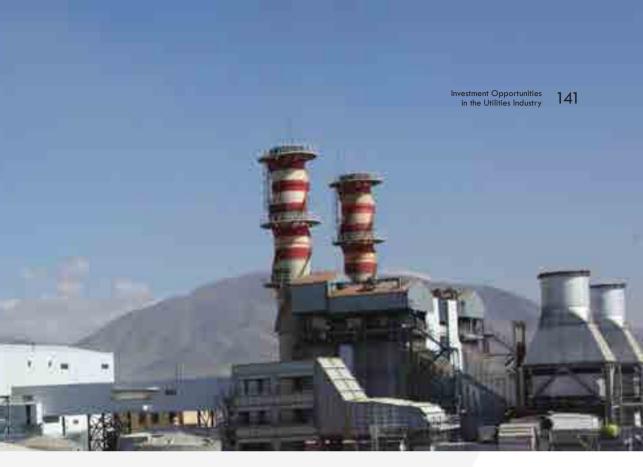
Type of Contract:

Buyback

# **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period





• The ability of connection to the network through the power plant substation

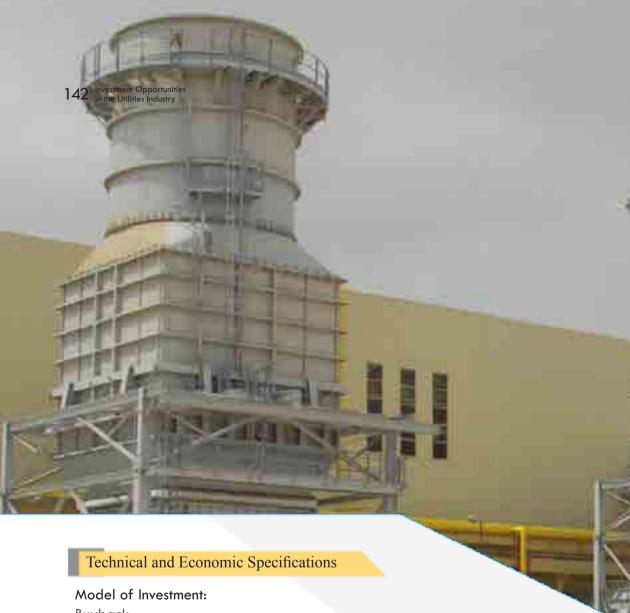
Project Time Schedule (Period of Preparation, Construction & Operation):

- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years. Site Preparation:
- 2%

Feasibility Study:

• feasibility studies by investor Position of Land Ownership: Is owned by the private investor .





Buyback

Capacity:

about 480MW consisting of 3 steam units.

Total Capital Investment Forecasting: more than 528 million Dollar

Return of capital period (year):

Up to 2 years

Net Present Value (NPV) - million Rials:

International Rate of Return (IRR) %: 12 percent





### 2.12- Shahid Kaveh Power Plant

Project Location (site) & Images:

4th kilometer of Ghayen-Mashhad Rd , South Khorasan Province , Islamic Republic of Iran

Type of Contract:

Buyback

## **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period





- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- $\bullet$  Construction period : 36 to 39 months.
- Return of capital period : Up to 2 years. Site Preparation:
- land ready for delivery Feasibility Study:
- feasibility studies by IPDC Position of Land Ownership: Is owned by the IPDC.

Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):



• Correspondence for obtaining environmental permit and water permit was conducted



Buyback

Capacity:

about 320MW consisting of 2 steam units.

Total Capital Investment Forecasting: more than 352 million Dollar

Return of capital period (year):

Up to 2 years

Net Present Value (NPV) - million Rials:

International Rate of Return (IRR) %:

12 percent





### 2.13- Shahrud Power Plant

### Project Location (site) & Images:

 $15 \mathrm{th}$  kilometer of Shahrud-Damghan Rd ,Semnan Province , Islamic Republic of Iran

Type of Contract: Buyback

## **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period



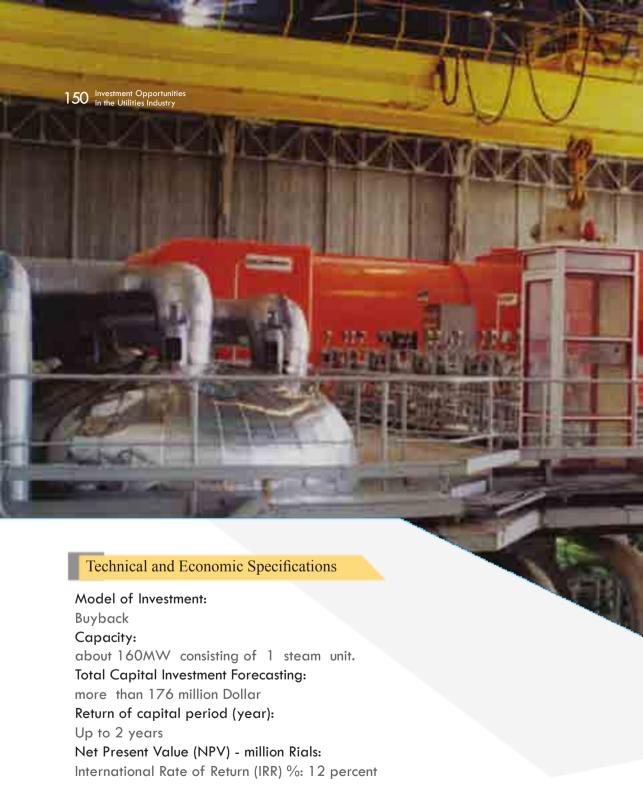


which performed (Costs will be paid by government)

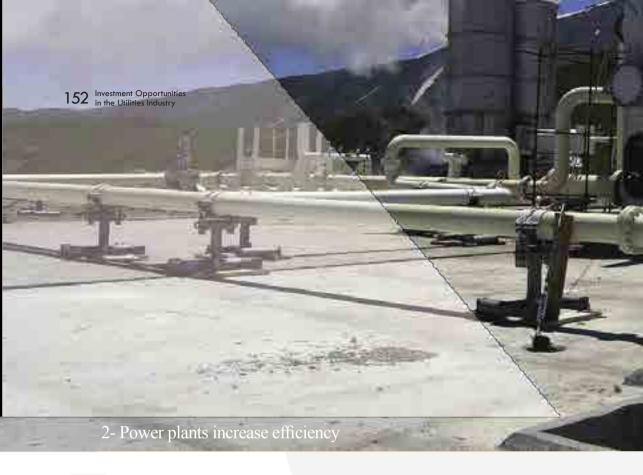
- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years. Site Preparation:
- land ready for delivery
   Feasibility Study:
- feasibility studies by IPDC
   Position of Land Ownership: Is owned by the private IPDC.
   Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):



- Regional Water has declared its readiness to grant a water permit.
- •Environmental permits have been obtained.







### 2.14- Soltanieh Power Plant

Project Location (site) & Images:

Sorkhe Dizaj Village, 25th kilometer of Qazvin-Zanjan Highway , Zanjan Province , Islamic Republic of Iran

Type of Contract:

Buyback

## **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period





which performed (Costs will be paid by government)

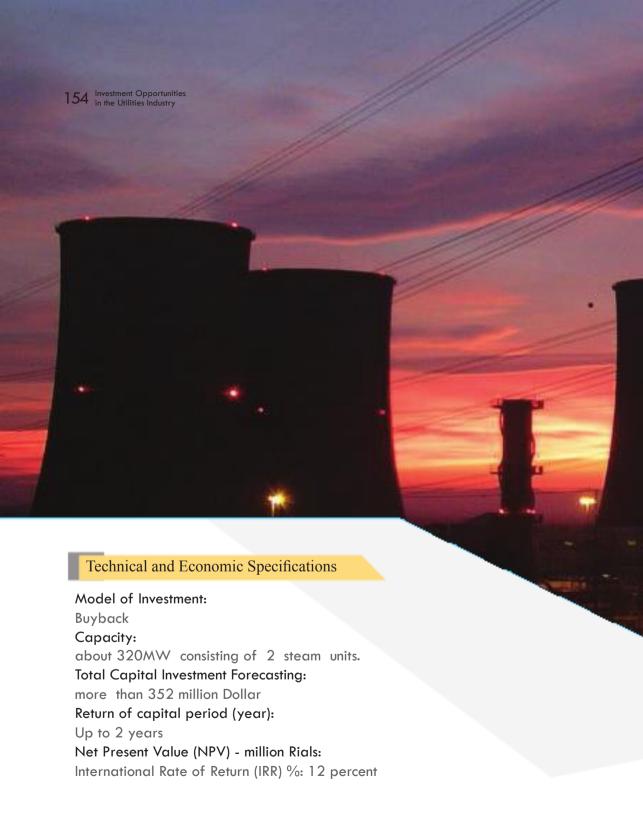
- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- $\bullet$  Construction period : 36 to 39 months.
- Return of capital period : Up to 2 years.

Site Preparation:

Feasibility Study:

- feasibility studies by investor
   Position of Land Ownership: Land Ownership is on track
   Legal Permissions (License of
   Constriction, Foreign currency guota, environmental assessment, ect.):
- Obtain the required environmental permit









### 2.15- South Isfahan Power Plant

### Project Location (site) & Images:

75 kilometers to the southwest Isfahan near the Mobarakeh Steel Complex, Isfahan Province , Islamic Republic of Iran

### Type of Contract:

Buyback

## **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period





which performed (Costs will be paid by government)

- The ability of connection to the network through the power plant substation Project Time Schedule (Period of Preparation, Construction & Operation):
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years.

Site Preparation:

Feasibility Study:

• feasibility studies by IPDC

Position of Land Ownership: Is owned by the IPDC.

Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):

- Environmental permit has been obtained.
- Water permit has been obtained (25 liters/sec) and in case of the subscription payment, up to 40 liters can be increased.





#### Model of Investment:

Buyback

### Capacity:

about 480MW consisting of 3 steam units.

### Total Capital Investment Forecasting:

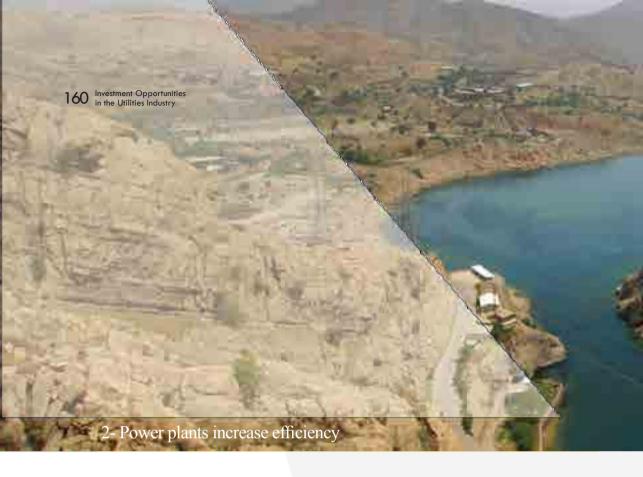
more than 528 million Dollar

Return of capital period (year):

Up to 2 years

Net Present Value (NPV) - million Rials:





### 2.16- Urmia Power Plant

### Project Location (site) & Images:

30th kilometer of Urmia-Mahabad Road , West Azerbaijan Province, Islamic Republic of Iran

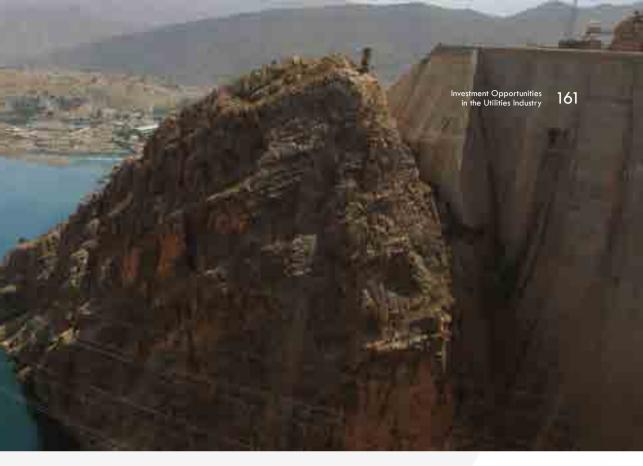
### Type of Contract:

Buyback

## Project Status

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for construct period which performed
- Preparation of fuel for operation period





which performed (Costs will be paid by government)

 The ability of connection to the network through the power plant substation
 Project Time Schedule (Period of Preparation, Construction & Operation):

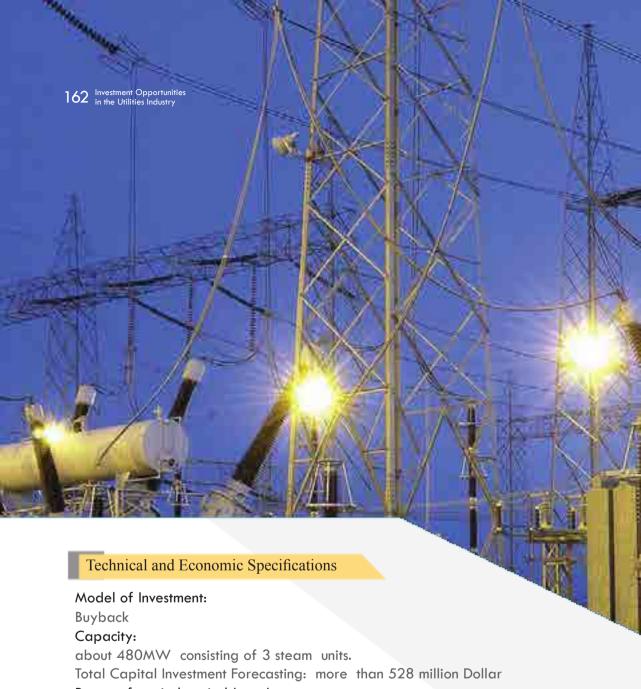
- Development period : 6 months to 1 year.
- Construction period : 36 to 39 months.
- Return of capital period : Up to 2 years.

Site Preparation:

Feasibility Study:

• feasibility studies by investor Position of Land Ownership: Is owned by the private investor.





Return of capital period (year):

Up to 2 years

Net Present Value (NPV) - million Rials:





### 2.17- Zagros Power Plant

Project Location (site) & Images: Kermanshah Province , Islamic Republic of Iran Type of Contract: Buyback

## **Project Status**

- Preparation of needed land for steam section of power plant
- Preparation of needed electricity for con- struct period which performed
- Preparation of fuel for operation period





which performed (Costs will be paid by government)

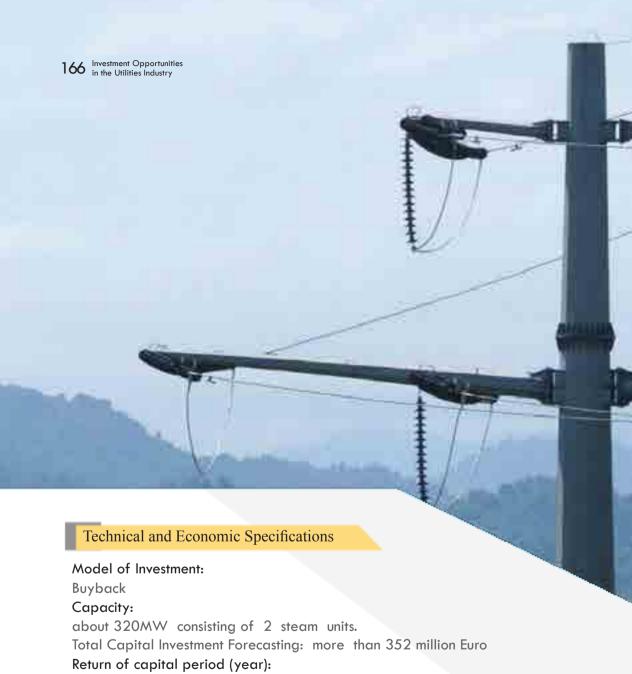
 The ability of connection to the net- work through the power plant substa- tion
 Project Time Schedule (Period of Preparation, Construction & Operation):

- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Return of capital period : Up to 2 years.

Site Preparation: Feasibility Study:

feasibility studies by investor
 Position of Land Ownership: Transfer of land yet to be finalized





Up to 2 years

Net Present Value (NPV) - million Rials:







# 2.18- Repowering Projects

		Recent	condition	1			
Φ 3 Ω	Steam Unit/ n No.	Practical Capacity/Unit (Mw)	Energy (Billion Kwh)	Initial Efciency	Unit/No.	Capacity/Unit (Mw)	Theoretical Capacity of Gas Unit/Mw 46
Isfahan	1	120	767	34	2	123	804
Hamedan	2	500	3197	37.5	4	201	162
Besat	1	75	480	31	1	162	804
Rajaee	2	500	3197	37.5	4	201	648
Tos	2	300	1918	36.7	4	162	582
Bistoon	1	320	2046	39	2	291	

	Recent condition							
Ф З Ω ⊐	Unit/ No.	Practical Capacity/Unit (Mw) Steam	Energy (Billion Kwh)	Initial Efciency	Gas Unit/No.	(Mw)	Theoretical Capacity of Gas Unit/Mw	
Loshan	2							
Bandar abbas	2	240	1535	34	4	123	492	
Tabriz	7	640	3479	35	4	291	1164	
Montazeri	4	350	2238	38	2	291	582	
Montazer ghaem	4	800	5116	35.6	8	201	1608	
Total	1	150	959	36	2	162	324	
	19	3995	24933	-	37	-	7416	

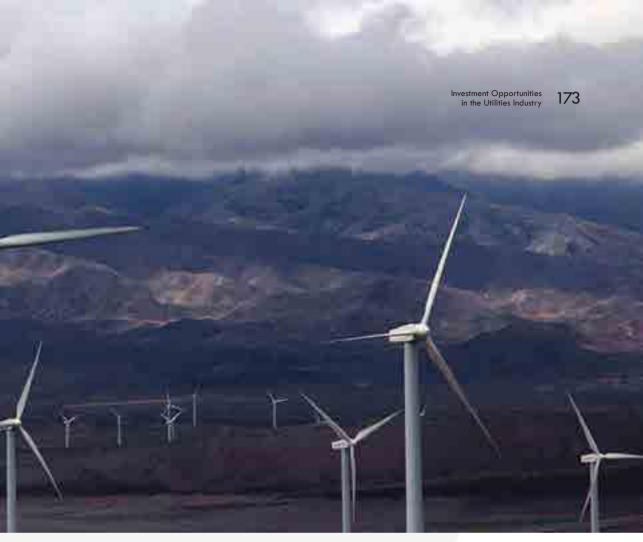
After Recovery												
Energy (Million Kwh)			Actual Efciency (mm3) % Efciency		Actual Efciency (mm3)	Utilized (Gaas After Reconvery 3)		Gas Saving mm3)	Investment/ us\$ million		Green Gas Deduction/1000 ton	
1755		4	48.2		516	364		152	133		342	
6254		5	51.4		1668	1217		451	451 437		1015	
1137		4	49.8		367	228	Ш	138	88		311	
6254		5	51.4		1668	1217	Ų.	451	432	2	1015	
4547			49.8		1239	913		326			733	
4326		5	54.6		1109	792		317	316		713	
After Recovery												
Energy (Million Kwh)	~	Efcienc	(mm3) %	Actual Efciency	Utilized Gas After Recovery (mm3)	mm3)	Gas Saving	million	Investment/ us\$		Green Gas Deduction/1000 ton	
3668	48.	2	1079		761	318		267	7		715	
9397	54.				1721	964		633		2168		
4470	54.				819	358		316		805		
11549	51.		3244		2247		997		874		2244	
2273 49.			631		456	175		176		394		
55630	51.	5	15382	2	10735	4647		403	34		0455	

## General Information

### Foreign Investment Promotion and Protection Act (FIPPA):

Foreign Investment Promotion and Protection Act (FIPPA):

- No restriction on the percentage of foreign shareholding.
- The volume of foreign investment in each individual case shall not be subject the any limitation.
- (and 4) repatriation of principal capital and profits is permissible.
- No restriction of the kind of acceptable investment.
- Facilitation of foreign investors entrance and residency.
- Coverage of non-commercial risks.
- Shortening the admission process and issuance of foreign investment license.
- Admittance of foreign governmental companies.
- Compensation of losses caused by expropriation and nationalization.
- Possibility of investment by Iranian investors using foreign originated capital



- , instead of foreigners.
- Possibility of referring disputes international arbitration.
- Foreign investors, (who have already invested in Iran, may benefit from "FIPPA" coverage for the principal investment already made.

## Other facilities

- •Taxes (duties) exemption.
  - o Up the 80% for 4 years.
  - o (In less developed areas) 100% for 10 years.
  - o Exporting 100% without limitations.



## 3.1- Maragheh 848 MW CCPP

Project Location (site) & Images:

Maragheh, East Azarbayjan Province , Islamic Republic of Iran

Type of Contract: BOT

Pre - Conditions of the Contract (Productivity, Equipment, etc.):

- Usage of gas Turbines Class "F" or higher models from the point efficiency in combined cycle power plants.
- Efficiency of combined cycle power plant should be 58 percent or more.

## **Project Status**

- Preparation of needed power plant land which performed (Costs should be paid by investor)
- Preparation of water for construction





and operation periods which performed (Costs should be paid by investor)

- Preparation of needed electricity for construct period which performed (Costs will be paid by government)
- Preparation of gas for operation period which performed (Costs will be paid by government)

Project Time Schedule (Period of Preparation, Construction & Operation):

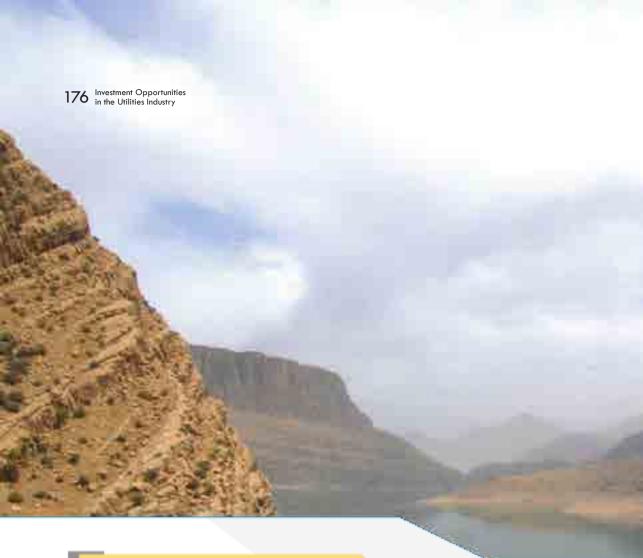
- Development period : 6 months to 1 year.
- Construction period : 36 to 39 months.
- Operation period : 20 years. Site Preparation: Nothing done

Feasibility Study: Nothing done

Position of Land Ownership: East Azarbayjan Natural Resources Office

Legal Permissions (License of Constriction, Foreign currency guota, environmental

assessment, ect.): Nothing done



## Technical and Economic Specifications

#### Model of Investment:

BOT

Capacity:

about 848MW consisting of the class "F" gas unit and the relative steam unit.

Total Capital Investment Forecasting: 678.4 million dollar

Operational Period (year):

20 years

Net Present Value (NPV) - million Rials:





## 3.2- Miyaneh 848 MW CCPP

Project Location (site) & Images:

Miyaneh, East Azarbayjan Province , Islamic Republic of Iran Type of Contract:

**BOT** 

Pre - Conditions of the Contract (Productivity, Equipment, etc.):

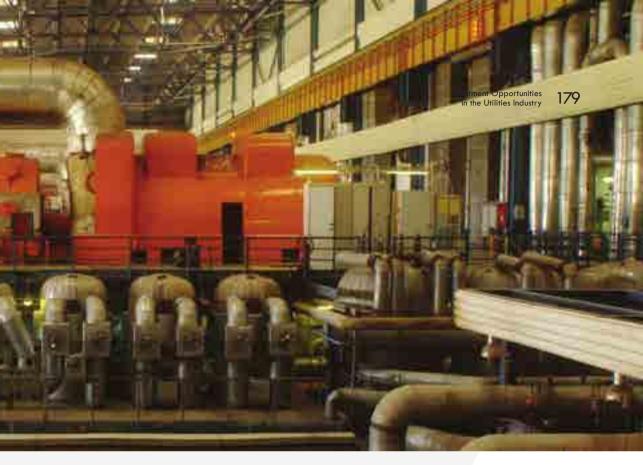
- Usage of gas Turbines Class "F" or higher models from the point efficiency in combined cycle power plants.
- Efficiency of combined cycle power plant should be 58 percent or more.

## **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

• Preparation of needed power plant land which performed (Costs should be paid by investor)





- Preparation of water for construction and operation periods which performed (Costs should be paid by investor)
- Preparation of needed electricity for construct period which performed (Costs will be paid by government)
- Preparation of gas for operation period which performed (Costs will be paid by government)

Project Time Schedule (Period of Preparation, Construction & Operation):

- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Operation period: 20 years.
   Site Preparation: Nothing done
   Feasibility Study: Nothing done

Position of Land Ownership: East Azarbayjan Natural Resources Office Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.): Nothing done



Capacity:

about 848MW consisting of the class "F" gas unit and the relative steam unit.

**Total Capital Investment Forecasting:** 

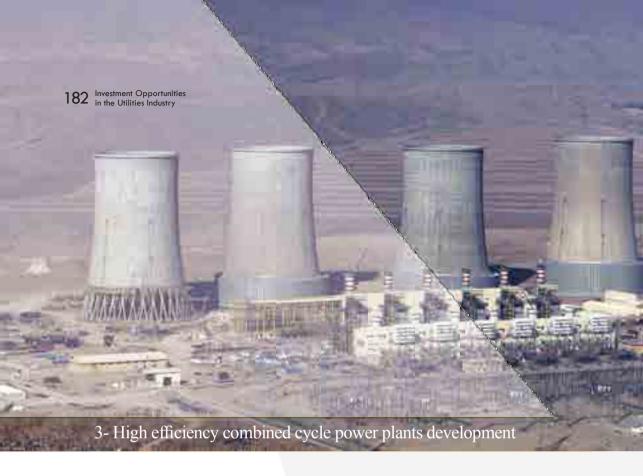
678.4 million dollar

Operational Period (year):

20 years

Net Present Value (NPV) - million Rials:





### 3.3- Omidiyeh 848 MW CCPP

Project Location (site) & Images:

Omidiyeh-Mahshahr Road, khuzestan Province , Islamic Republic of Iran Type of Contract: BOT

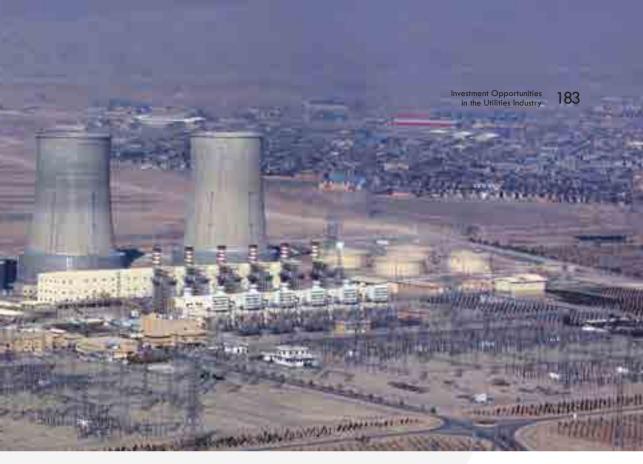
Pre - Conditions of the Contract (Productivity, Equipment, etc.):

- Usage of gas Turbines Class "F" or higher models from the point efficiency in combined cycle power plants.
- Efficiency of combined cycle power plant should be 58 percent or more.

### **Project Status**

- Preparation of needed power plant land which performed (Costs should be paid by investor)
- Preparation of water for construction





and operation periods which performed (Costs should be paid by investor)

- Preparation of needed electricity for construct period which performed (Costs will be paid by government)
- Preparation of gas for operation period which performed (Costs will be paid by government)

Project Time Schedule (Period of Preparation, Construction & Operation):

• Development period: 6 months to 1 year.

Construction period: 36 to 39 months.

• Operation period : 20 years. Site Preparation: Nothing done

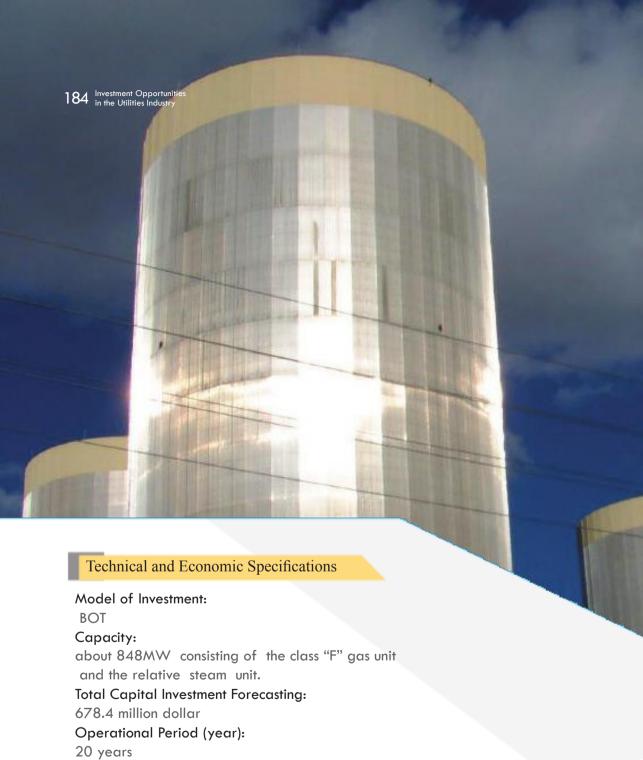
Feasibility Study:

Carry out feasibility and network studies

Position of Land Ownership: Khouzestan regional electric company

Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):

• Obtain the required environmental permit, well permit for water, electricity permit and gas permit.



Net Present Value (NPV) - million Rials:





### 3.4- Fars North 848 MW CCPP

#### Name of Project:

Combined Cycle Power Plant

Project Location (site) & Images:

MarvDasht-Arsanjan Road, Fars Province, Islamic Republic of Iran

Type of Contract: BOT

Pre - Conditions of the Contract (Productivity, Equipment, etc.):

• Usage of gas Turbines Class "F" or higher models from the point efficiency in combined cycle power plants.

• Efficiency of combined cycle power plant should be 58 percent or more.

## **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

• Preparation of needed power plant land





which performed (Costs should be paid by investor)

- Preparation of water for construction and operation periods which performed (Costs should be paid by investor)
- Preparation of needed electricity for construct period which performed (Costs will be paid by government)
- Preparation of gas for operation period which performed (Costs will be paid by government)

Project Time Schedule (Period of Preparation, Construction & Operation):

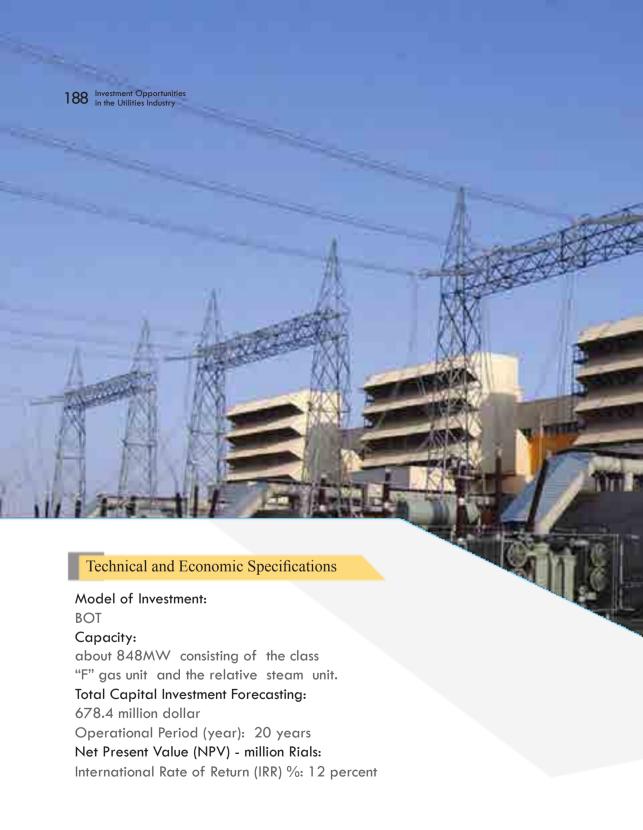
- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Operation period: 20 years.

Site Preparation: Nothing done

Feasibility Study: Nothing done

Position of Land Ownership: Fars Natural Resources Office

Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.): Nothing done







#### 3.5- Tabriz 848 MW CCPP

#### Name of Project:

Combined Cycle Power Plant

Project Location (site) & Images:

Tabriz, East Azarbayjan Province, Islamic Republic of Iran

Type of Contract:BOT

Pre - Conditions of the Contract (Productivity, Equipment, etc.):

- Usage of gas Turbines Class "F" or higher models from the point efficiency in combined cycle power plants.
- Efficiency of combined cycle power plant should be 58 percent or more.

## **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

• Preparation of needed power plant land





which performed (Costs should be paid by investor)

- Preparation of water for construction and operation periods which performed (Costs should be paid by investor)
- Preparation of needed electricity for construct period which performed (Costs will be paid by government)
- Preparation of gas for operation period which performed (Costs will be paid by government)

Project Time Schedule (Period of Preparation, Construction & Operation):

- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Operation period: 20 years.
   Site Preparation: Nothing done
   Feasibility Study: Nothing done

Position of Land Ownership: East Azarbayjan Natural Resources Office Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.): Nothing done



# Technical and Economic Specifications

#### Model of Investment:

BOT

#### Capacity:

about 848MW consisting of the class "F" gas unit and the relative steam unit.

Total Capital Investment Forecasting: 678.4 million dollar

## Operational Period (year):

20 years

Net Present Value (NPV) - million Rials:





#### 3.6- Zahedan 848 MW CCPP

#### Project Location (site) & Images:

Zahedan-Zabol Road, Sistan and Balouchestsn Province , Islamic Republic of Iran Type of Contract: BOT

Pre - Conditions of the Contract (Productivity, Equipment, etc.):

- Usage of gas Turbines Class "F" or higher models from the point efficiency in combined cycle power plants.
- Efficiency of combined cycle power plant should be 58 percent or more.

## **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

 Preparation of needed power plant land which performed (Costs should be paid by investor)





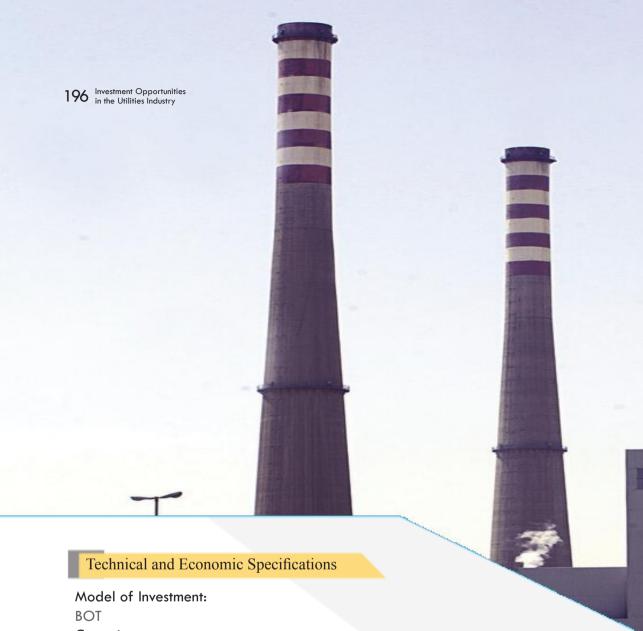
- Preparation of water for construction and operation periods which performed (Costs should be paid by investor)
- Preparation of needed electricity for construct period which performed (Costs will be paid by government)
- Preparation of gas for operation period which performed (Costs will be paid by government)

Project Time Schedule (Period of Preparation, Construction & Operation):

- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Operation period: 20 years.
   Site Preparation: Nothing done
   Feasibility Study: Nothing done

Position of Land Ownership: Sistan Natural Resources Office

Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.): Nothing done



#### Capacity:

about 848MW consisting of the class "F" gas unit and the relative steam unit.

### Total Capital Investment Forecasting:

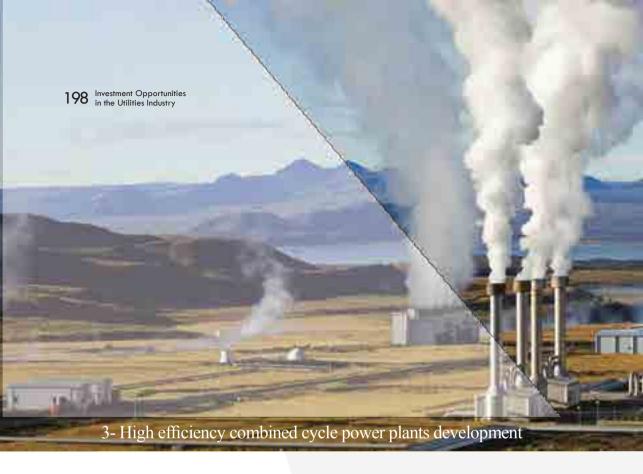
678.4 million dollar

## Operational Period (year):

20 years

## Net Present Value (NPV) - million Rials:





## 3.7- Zanjan 500 MW CCPP

## Project Location (site) & Images:

Sorkhe Dizaj Village, 25th kilometer of Qazvin-Zanjan Highway , Zanjan Province , Islamic Republic of Iran

Type of Contract: BOT

Pre - Conditions of the Contract (Productivity, Equipment, etc.):

- Usage of gas Turbines Class "F" or higher models from the point efficiency in combined cycle power plants.
- Efficiency of combined cycle power plant should be 58 percent or more.

# **Project Status**

Present Infrastructures (Supply of land, water, electricity & gas):

 Preparation of needed power plant land which performed (Costs should be paid by investor)



- Preparation of water for construction and operation periods which performed (Costs should be paid by investor)
- Preparation of needed electricity for construct period which performed (Costs will be paid by government)
- Preparation of gas for operation period which performed (Costs will be paid by government)
- The distance (intervals) from the 400KW electricity transmission line, 3 kilometers.
- The distance (intervals) from the 230KW electricity transmission line, 2 kilometers.

Project Time Schedule (Period of Preparation, Construction & Operation):

- Development period : 6 months to 1 year.
- Construction period: 36 to 39 months.
- Operation period : 20 years.

Site Preparation:

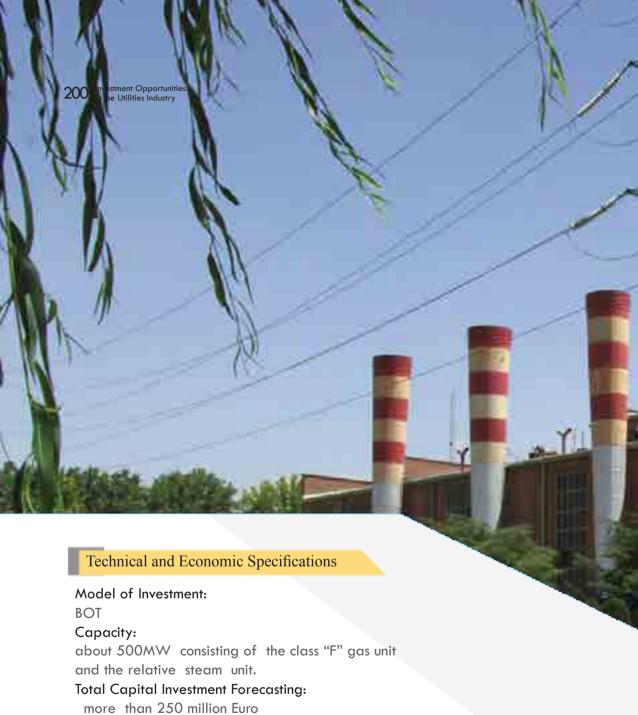
- Prepare topographic maps of the site and carry out studies related to the access road to ghazwin \_zanjan freeway.
- Construction of site perimeter wall and provide necessary power supply for the construction phase of the power plant.
- Complete well digging and install relating equipments.
- Construct necessary levee and access road.

Feasibility Study:

- Carry out environmental, geotechnical and hydrological studies
- Prepare and approve sight plan and SLD

Position of Land Ownership: Zanjan regional electric company Legal Permissions (License of Constriction, Foreign currency guota, environmental assessment, ect.):

- Obtain necessary permit for digging a deep water well with a depth of 130 m and maximum output of 28.5 litr/s
- Obtain the required environmental permit, well permit for water, electricity permit and gas permit.



Operational Period (year):

20 years

Net Present Value (NPV) - million Rials:



# 4. Development of Small Scale DG & CHP

DO)4/	DECIONAL STATION	PROVINCE
ROW	REGIONAL STATION	
1	AZARBAIJAN	EAST & WEST AZARBAHJAN,ARDABIL
2	ISFAHAN	ISFAHAN-CHMAHARBAKHTIARI
3	BAKHTAR	LORESTAN-HAMADAN-CENTER
4	TEHRAN	TAHRAN-ALBURZOQOM
5	KHORASAN	NORTH,SOUTH&RAZAVI KHORASAN
6	KHOZESTAN	KHOOZESTAN-KOHGULIYEH&BOYER AHMAD
7	ZANJAN	ZANJAN-GAZVIN
8	SEMNAN	SEMNAN
9	SISTAN- BALUCHESTAN	SISTAN - BALUCHESTAN
10	WEST	KERMANSHAH-KORDESTAN-ILAM
11	FARS	FARS-BOOSHEHR
12	KERMAN	KERMAN
13	GILAN	GILAN
14	MAZANDARAN	MAZANDARAN-GOLESTAN
15	HORMOZGAN	HORMOZGAN
16	YAZD	YAZD
SUM		

NO & CAPACITY	TOTAL CAPACITY(MW)	TOTAL AMOUNT( \$ MILLION)	
8*25	200	132	
8*25	200	132	
8*25	200	132	
12*25	300	198	
6*25	150	99	
6*25	150	99	
8*25	200	132	
4*25	100	66	
4*25	100	66	
8*25	200	132	
8*25	200	132	
8*25	200	132	
6*25	150	99	
10*25	250	165	
8*25	200	132	
8*25	200	132	
120*25	3000	1980	

# 5. Renewable power plants Projects

	ROW	RENEWABLE	PROVINCE/AREA	
			YAZD	
			ISFAHAN	
			FARS	
			KERMAN	
	1	PHOTOVOLTAIC	SISTAN-BALUCHESTAN	
			QOM-CENTER	
			SEMNAN	
			KHORASAN	
		TOTAL/SOLAR PROJECTS		
			razavi khorasan-khaf	
	2	WIND	SISTAN-BALUCHESTAN	
			QAZVIN-TAKESTAN	
			EAST AZERBAILAN	
		TOTAL/WIND PROJECTS		
	3	GEOTHERMAL PROJECTS	ARDABIL-MESHKIN SHAHR	
	4	BIOMASS PROJECTS		
	5 SMALL HYDROPOWER PROJECTS		SOUTH & NORTH	
		SUM		

CAPACITY(MW)	LAND/HEC	REQUIRES AMOUNT (USD MILLION)	
100	200	200	
100	200	200	
100	200	200	
100	200	200	
50	100	100	
50	100	100	
50	100	100	
50	100	100	
600		1200	
750	6000	1300	
650	5200	1150	
500	4000	875	
250	2000	450	
2150		17500	
100	ACCORDING TO REQUEST	500	
50		175	
	-	125	
3000		5775	

# 5.1- Solar photovoltaic power projects

Project Profile for foreign Investme	nt	
	Name of Project	
Introduction to Project	Project Location (site)& images	
Introduction to Project	Type of Contract	
	Pre - Conditions of the Contract ( Productivity; (Equipment; etc	
	present infrastructures (Supply of land; water; elec- (tricity& gas	
	project Time Schedule ( period of Preparation ; (Construction & Operation	
project Status	Site Preparation	
F 1111	Feasibility Study	
	position of Land ownership	
	Legal Permissions (License of constriction; foreign .(currency quota; environmental assessment ;etc	
	Model of Investment	
	Capacity	
Technical and Economic Specifi-	Total Capital investment Forecasting	
Technical and Economic Specifi- cations	(Operational Period (year	
	(million Rails- Net present Value (NPV	
	%(International Rate of Return (IRR	
	Foreign Investment Promotion and Protection Act ((FIPPA	
General Information	Other facilities	
General information	Site Map	
	Name of Company ( Address; Tel & Fax ; Email ; (website	

(Solar Photovoltaic Power Plants (including 34 Power Plants
Yazd - South & Razavi Khorasan - Fars - Isfehan - Qom- Alborz- Sistan & Balouches- .tan- Tehran- Semnan- Hormozgan
Guaranteed Electricity Purchase
Obtaining Environmental, Grid connection and Land Licenses
is available for some projects
PPA period is 20 years (including 18 months for Development and Construction peri-
most of the projects are in process of obtaining licenses
has been done in some of the projects
has been done in some of the projects
in some projects, all legal licenses have been obtained
private sector - using foreign finance
about 400 MW
\$ total investment about 800 million
years 20
-
-
will be obtained
<del>-</del>
is available in our brochure
private companies which names are attached to our brochure

# 5.2- Wind Power Projects

Project Profile for foreign	n Investment
	Name of Project
Introduction to Project	Project Location (site)& images
	Type of Contract
	(Pre - Conditions of the Contract ( Productivity; Equipment; etc
	(present infrastructures (Supply of land; water; electricity& gas
	(project Time Schedule ( period of Preparation ; Construction & Operation
	Site Preparation
project Status	Feasibility Study
	position of Land ownership
	Legal Permissions (License of constriction; foreign currency quota; environ- .(mental assessment ;etc
	Model of Investment
	Capacity
Technical and Economic	Total Capital investment Forecasting
Specifications	(Operational Period (year
	(million Rails- Net present Value (NPV
	%(International Rate of Return (IRR
	(Foreign Investment Promotion and Protection Act (FIPPA
0 11.6	Other facilities
General Information	Site Map
	(Name of Company ( Address; Tel & Fax ; Email ; website

(Wind Power Plants (including 32 Power Plants
Khaaf - Qazvin - Zabol - Ahar - Manjil & Binaloud areas
Guaranteed Electricity Purchase
Obtaining Environmental, Grid connection and Land Licenses
is available for some projects
(PPA period is 20 years (including 18 months for Development and Construction period
most of the projects are in process of obtaining licenses
has been done in some of the projects
has been done in some of the projects
in some projects, all legal licenses have been obtained
private sector - using foreign finance
about 2514 MW
\$ about 4500 million
years 20
-
will be obtained
-
is available in our brochure
private companies which names are attached to our brochure

# 5.3- Bio-mass power Plants Projects

Project Profile for fo	preign Investment
	Name of Project
Introduction to Project	Project Location (site)& images
	Type of Contract
	Pre - Conditions of the Contract ( Productivity; Equipment; etc)
	present infrastructures (Supply of land; water; electricity& gas)
	project Time Schedule ( period of Preparation ; Construction & Operation)
	Site Preparation
project Status	Feasibility Study
	position of Land ownership
	Legal Permissions (License of constriction; foreign currency quota; environmental assessment ;etc).
	Model of Investment
	Capacity
Technical and Economic Specifi-	Total Capital investment Forecasting
cations	Operational Period (year)
	million Rails- Net present Value (NPV)
	International Rate of Return (IRR)%
	Foreign Investment Promotion and Protection Act (FIPPA)
General Informa-	Other facilities
tion	Site Map
	Name of Company ( Address; Tel & Fax ; Email ; website)

Bio-mass Power Plants (including 19 Power Plants)			
Golestan- East & West Azerbaijan- Semnan- Gilan- Isfahan- Fars- Tehran- Kordestan- Kermanshah- Khuzestan- Sistan & Balouchestan- Markazi- Ardabil- Qom- Qazvin.			
Guaranteed Electricity Purchase			
Obtaining Environmental, Grid connection and Land Licenses			
is available for some projects			
PPA period is 20 years (including 18 months for Development and Construction period)			
most of the projects are in process of obtaining licenses			
has been done in some of the projects			
has been done in some of the projects			
in some projects, all legal licenses have been obtained			
private sector - using foreign finance			
about 75 MW			
total investment about 265 million \$			
20 years			
<del>-</del>			
-			
will be obtained			
is available in our brochure			
private companies which names are attached to our brochure			