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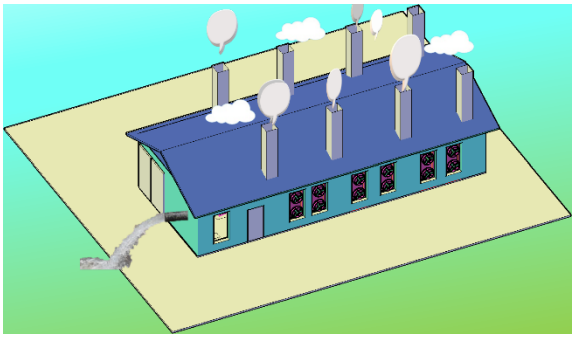
Water production plant from air and steam and non-conventional waters



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Financial program

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Executive summary

A water plant is a complex of constructions and facilities, in which water is produced from the air, sometimes from power steam, sea salt water, sewage water, fresh water, sanitary water, agricultural and industrial water on a large scale.

Project objectives

Water production, suitable, everywhere, for everyone.

Business description

Production of water plant, at the place of customer's request and selling it at the same time.

Products and services

Water factory, with complete building and its equipment on site, service, maintenance and warranty.Contractory construction of the building

Financing need

Building a sample: $120,000.

Company establishment: $100,000

Power supply and training: $200,000

Marketing: $200,000

Key people

Original People Company:

Civil Engineer
Installation engineer
electrical engineer

Risk assessment and contigency plan

The whole project is carried out with local studies and feasibility studies, and the amount of water produced is guaranteed, which has minimum and maximum production.

If there is no need for water or there is less demand for water, the factory is used as a cold store and storage for food and agricultural and domestic products.

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01.

Business overview

The company receives the work order from the customer and designs the requested water treatment plant, and a local contractor under the supervision and supervision of the company performs the project in the form of contract management, the repair and warranty work is also done by the local contractor under the supervision of this company. to be

The supply of parts is the responsibility of this company.

Mission, vision, values

Mission: Production and operation of a water factory in the geographical area and for all needs, economically and healthily.

Perspective: Due to global warming, climate changes and population growth in all countries, providing adequate water is a fundamental challenge and need, and this method has a lot of potential for expansion and development.

Values: The production cost of the factory is calculated daily, the purchase of materials, and the cost of implementation, and the cost of construction, supervision, and project management is added to it as a percentage and agreement.

Industry overview and trends

The water factory consists of civil, mechanical and electrical works, sensors and control devices and purification and decontamination systems.

Technological trends

This factory sucks humid air or steam from power plants and factories that have steam output, as well as steam from evaporation of sea water or sewage water, and compresses it from the underground cooling system into the inner space of the factory. It supplies the dew, and the humid and compressed air

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is converted into water by the water generators and poured into the underground storage and sent out from there.

Government regulations

It requires a local construction permit from the municipalities.

The market

Overview of market trends

Anyone who needs water.
Farmers, industry, people of remote areas, people of dry and desert areas.

Target market

Asia, America, Europe, Africa, Australia.

The competition

Competitors and types of competition

Companies manufacturing water purification devices and water desalination systems.

Competitors’ strengths and weaknesses

High cost of competitors.
Using expensive filters.
Service and maintenance is time-consuming and expensive.
Limited production of fresh water.

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02.

Sales and marketing

BDC’s

Customers

Customers include the community that needs water, such as farmers, urban and remote rural people suffering from drought, large and small industries.

Suppliers

Construction materials are supplied from the local market, and the preparation and production of refrigeration parts, ventilators and pumps are outsourced.

Advertising and promotion

- Advertising and advertising:
- Create an Internet site
- Collaboration with design and design offices
- social media advertisments
- Promotional ads in projects

Pricing and distribution

- An entire project is done as a contract management, according to the specific design and specific implementation of each project, the costs will be different.

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03.

Operating plan

Detail how and where you get your work done. Include equipment and technology required to serve your customers, anticipated financial requirements to maintain and operate your business, and external environmental regulations or laws that govern your business or industry.

Business location

- Office with an area of 100 meters and storage warehouse working tool 400 square meters

Equipment

Project design and control equipment, computer and office equipment. Test and control equipment for outsourced parts.

Technology requirements and investment needs

Using methods to reduce energy consumption in water production, using new energies, and inventing methods to eliminate electricity consumers and transfer modern power with minimal power and energy consumption.

Using an underground cooling system that works with the lowest energy to provide cooling for the device. And installing intelligent control systems.

Environmental compliance

- **In the production of this factory, non-durable and waste materials are not used and there is no industrial or non-industrial waste. It is used for the development and preservation of the environment.**

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04.

People

Identify key people within your organization, along with external advisors that you rely upon to conduct your business successfully.

Description of the management team

- Designer and manager of the collection:
  - Ehsan Abedini
  - Age 53 years
  - Civil Engineer
  - Opened from Zanjan Road Department.
  - Supervising engineer and Iranian engineer
  - Inventor
  - 30 years of executive experience

Plan consultants

Meisam Rezaei (Ph.D)

Assistant Prof.

Soil and Water Research Institute (SWRI)

Meshkin-dasht road, Imam Khomeini Ave. Karaj, Iran (Postal code: 3177993545)

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http://www.swri.ir/

Vice-chair of the FAO International Network of Salt-Affected Soils (INSAS)
http://www.fao.org/global-soil-partnership/insas

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Mahmoud Esmaeili Omidvar(Ph.D)

PhD in management and business

Inventor and member of IFIA

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maeiliomidvar00@gmail.com

Description of advisory team

Key employees

- **Manager and work to meet all work items**

	Name or title	Key responsibilities	Qualifications
1	the manager	Marketing and management of the company and contractors	Building engineer and facilities
2	Expert	Implementing projects	Building engineer and facilities
3	Expert	Implementing projects	Building engineer and facilities
4	Expert	Administrative affairs, buying and selling	Building engineer and facilities
Additional information			

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05.

Action plan

Outline the goal of the project, resources required, (people and money), key milestones (including dates and measurable outcomes), and an end-date. Identify key individuals or teams responsible, external dependencies and risk management and contingencies, (Plan B).

Project objectives

What to include here:

- **What is your goal and your target completion date?**

- The company is currently operating in Iran.

- And in another country, after establishing a marketing, a contract begins.

- Does not restrict the runtime

Ressources required

What to include here:

- **How much money will you require to complete the project?**
- **How much will you finance yourself?**
- **Will you require new equipment or real estate?**
- **Do you need to hire new people?**

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• This business needs 100 meters of office space and 400 meters of workshop space.
• Get local licenses.
• Required fixed capital of $320,000.
• Capital and current costs for one year are $300,000 .

Risk assessment and contingencies

What to include here:

- **Identify any internal or external events that could trigger an adjustment in your timetable.**
- **Do you have the right employees and leaders in place?**
- **Could there be delays in product development or delivery?**
- **Is there anything that could affect your cash flow?**
- **How will you monitor and mitigate these risks?**
- **What is your Plan B?**

- If the customer's lack of appreciation, the traditional work of construction works are accepted.
- Contractor of any construction operation

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06.

Financial program

- Your financial application must include balance sheet, profitability and loss account, predict accounts in cash, calculating head-to-head, calculation of capital return and financial statements.

Direct and indirect salary

row	side	no	Monthly salary and benefits	Annual salary and benefits	Premium work	considerations
1	the manager	1	5000	60000	18000	78000
2	Expert	8	32000	384000	115200	499200
3	Guard	3	12000	144000	43200	187200
						764400

Workshop building

row	Description	**no**	Amount	**total**
1	The entire land of the company	**1000**	**60**	**60000**
2	Niches And salon	**400**	**120**	**48000**
3	**Office building**	**100**	**170**	**17000**
				125000$

Estimate of fixed capital:

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Capital expenditures :

row	Description	Amount
1	Workshop building	125000
2	Equipment	200000
3	Car pickup	21000
4	Office equipment	40000
5	Unforeseen	50000
6		
		436000$

Before exploitation costs:

row	Description	Amount
1	Provisional costs, counseling, licensing, registration, bank agreements (4% capital costs)	22100
2	Launching costs and experimental production (30 days of water, electricity, fuel, raw materials, salary)	63700
3	Human resource training (2% of the total annual salary)	15288

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		101088 $

- Before exploitation costs + Capital costs = Fixed capital
- Fixed capital=101088+436000= 537088

Raw materials and packaging

row	Description	Amount $ The cost of raw materials	The cost is over
1	water machine	120000	120000
2			

row	Description	Amount $	Number of production per month	
1	water machine	120000	10	1200000
2				
				1200000

Estimation of capital in circulation:

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row	Title	Description	Amont
1	Raw materials and packaging	1 month of primary and packaging	**1200000**
2	salary	1 month salary costs	**20125**
3	Battalion	1 month of water, electricity, fuel and repair costs	**10000**
			1230125

How To Investment:

Description	The contribution of the applicant		Banking facility		total
	Amount	Percent40%	Amount	Percent60%	
Fixed capital	214835		322253		537088
Annual current	549898		824847		1374746
	764733		**1147100**		**1911834**

Current expenses annually:

Description	Amont

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The cost of raw materials	14400000
The cost of salary	764400
Energy costs (water, electricity and fuel)	10000
Repair and maintenance costs	12000
Unpredictable cost of production (5% of high items)	56820
Administrative and sales costs (one percent of high items)	11932
Financial Facility Cost (5% of the Amount of Loan)	55000
insurance costs (two in thousands of capital)	1307
Stationary cost	13070
Taxes	20000
The cost of depreciation before exploitation (20% before exploitation costs)	20217
total sum	**15364746**

Calculate fixed and variable costs:

Description of the cost	Variable cost		Fixed costs		Total cost
	amount	cost	amount	cost	
The cost of raw materials	30	4320000	70	10080000	14400000
The cost of salary	30	46800	70	109200	764400
Energy costs (water, electricity and fuel)	80	8000	20	2000	10000

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Repair and maintenance costs	80	9600	20	2400	12000
Unpredictable cost of production (5% of high items)	50	28410	50	28410	56820
Administrative and sales costs (one percent of high items)	10	1193	90	10739	11932
Financial Facility Cost (5% of the Amount of Loan)	.	.	100	55000	55000
insurance costs (two in thousands of capital)	50	650	50	650	1307
Stationary cost	50	6500	50	6500	13070
Taxes	50	10000	50	10000	20000
The cost of depreciation before exploitation (20% before exploitation costs)	.		100	20217	20217
		4431153		10325616	
					14756769

Sell one year

row	Description	Amount $	Number of production per year	sales price	total	total
1	Selling the device	120000	120	156000	18720000	4320000

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2	Warranty	12000	120	12000	1440000	1200000
					20160000	5520000 $

Special profit:

total income- Total cost**=**20160000**-14756769=5403231**

Head-to-head calculation:

Head-to-head calculation= Fixed costs**/(** total income**-**Variable cost)= 14756769/(**20160000**-**4431153**)= 14756769/15728847=0/94

Capital Rate:

Capital rate = (Special profit+ The cost of bank facility)/ The whole capital

5403231+55000=5458231

7380254/**1911834**=**3.86**

Capital return period:

Capital return period= **The whole capital**/(Special profit+ Depreciation+ Cost of banking facilities)

=1911834/(5403231**+**55000**+20217)=1911834/5478448=0/35**

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Description:

- In the design of this device, we have used updated and improved technologies, such as transferring hydraulic power to ventilators from a central pump, replacing electromotors of ventilators, and the cooling system from an underground chiller, which greatly reduces energy consumption, and from solar power plants. We have used Velizri to vaporize sea water or waste water. The cost of producing water will be much lower than conventional methods and the quality of produced water will be comparable to mineral water and can compete with them.
- Producer of water from the air, desalination of sea water, and waste water, by industrial and thermal methodsAtmospheric Water Generator, abbreviated as AWG, is a device that produces water from moist ambient air. The water vapor in the air condenses, its temperature drops below the dew point, the air is exposed to dryers or pressurizes the air. There is always some water in the air that can be extracted. The two main methods used are cooling and drying.In the design of this device, we have used updated and improved technologies, such as transferring hydraulic power to ventilators from a central pump, replacing electromotors of ventilators, and the cooling system from an underground chiller, which greatly reduces energy consumption, and from solar power plants. We have used Velizri to vaporize sea water or waste water. The cost of producing water will be much lower than conventional methods and the quality of produced water will be comparable to mineral water and can compete with them.Refrigerant densityIn a refrigeration condensing system that produces water from the atmosphere, a compressor circulates the refrigerant through a condenser and delivers it to an evaporator coil that cools the surrounding air. This process lowers the temperature of the air to the dew point and causes the water to condense. A controlled fan directs the filtered air towards the coil. Then the resulting water is purified using the filtration system and transferred to the holding tank because this will keep the water clean and reduce possible risks from bacteria and viruses that may be transferred from the ambient air to the water through the condenser.The amount of water production depends on the relative humidity and temperature of the ambient air and the size of the compressor. Devices producing water from the atmosphere get higher efficiency by increasing the relative humidity and increasing the air temperature. As a rule of thumb, air water generators do not work effectively when the temperature drops below 18.3°C (65°F) or when the relative humidity drops below 30%. This is because they are relatively inefficient when placed inside air-conditioned offices. The economic efficiency of a water generator depends on the capacity of the device, the humidity of the place, the temperature conditions and the energy cost per unit.In order to be able to carry out the process of desalination of sea water, it must first be taken through pumping stations, close to the coast, and transferred to the treatment area through canals, wells or galleries.Thermal industrial desalination waterIn this method of desalination, the water is heated and turned into steam, which separates the water from the salt, because the salts do not undergo the evaporation process. This process also occurs naturally in nature, because when the sea water evaporates, the salts remain, without the water allocated in the clouds becoming salty.
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