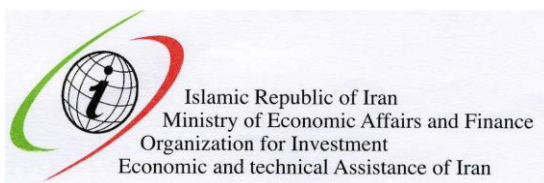


10. Project Status:

- Feasibility study available? Yes No
- Required land provided? Yes No
- Legal permissions (establishment license, foreign currency quota, environment, etc) taken? Yes No
- Partnership agreement concluded with local/foreign investor? Yes No
- Financing agreement concluded? Yes No
- Agreement with local / foreign contractor(s) concluded? Yes No
- Infrastructural utilities (electricity, water supply, telecommunication, fuel, road, etc) procured? Yes No
- List of know-how, machinery, equipment, as well as seller / builder companies defined? Yes No
- Purchase agreement for machinery, equipments and technology concluded? Yes No

1



Financial Structure

11. Finance

| Description | Local Currency Required | | | Foreign Currency Required Million Dollar | Total Million Dollar |
|------------------|-------------------------|---|------------------------------------|---|-------------------------|
| | Million Rials | Rate | Equivalent in Million Dollar | | |
| Fix Capital | 14125.27 | 32500 Rials for each Dollar | 434.6 | 250 | 684.5 |
| Working Capital | 2239.99 | | 69 | 0 | 69 |
| Total Investment | 16365.25 | | 503.5 | 250 | 753.6 |

- Value of foreign equipment/machinery: 250000 dollars
- Value of local equipment/machinery: million dollar
- Value of foreign technology: million dollar
- Value of local technology: million dollar
- Net Present Value (NPV): 23776 Million Rials for 10 Year, discount rate: 20%
- Internal Rate of Return (IRR): 39.28%
- Payback Period (PP): 44.44%

General Information

12. Project Type: Establishment Expansion and completion

13. Company Profile:

- Name (legal /natural persons):
- Company Name:
- Address:

| | |
|--|-----------|
| -Tel: | Fax: |
| -E-mail: | Web site: |
| -Sector: private sector <input type="checkbox"/> public sector <input type="checkbox"/> other <input type="checkbox"/> | |
| | |

| |
|---|
| <i>Please attach follow documents if available</i> |
| |
| <ul style="list-style-type: none">- Pre-feasibility study <input checked="" type="checkbox"/>- Feasibility study <input type="checkbox"/>- Legal permissions (establishment license, foreign currency quota, environment, etc) <input type="checkbox"/> |

Ministry of Economic Affairs and Finance
Organization for Investment Economic and Technical Assistance of Iran
(OIETAI)
Foreign Investment Center of Lorestan Province
Tel (Tehran): (021) 33967749-33967766-33967762-39902485-39902488-39902486
Tel (Khoramabad): (066) 33229577
Fax: 33967774
Website: www.investiniran.ir
eco_isc@yahoo.com

Management and Planing Organization of Lorestan Province

Plan

Home wind turbine production

Product's introduction

The main goal of this plan is to establish a unit of producing home wind turbine in Lorestan province. The ISIC code of this product I 2911412302 (and 8-digic code is 29111240) of unclassified machineries and equipment in other places (29) and subgroup of making engines and turbines except for aerial vehicles engines, vehicles and bicycle and 3-cycle engines (2911).

The conditions under which the smaller turbines than 660 kW are permitted to be imported obtained from trade ministry and mines and industries ministry are to pay 15% import fees in 2017 (custom fee:4% and trading fee:11%) and for turbines larger than 66 kW, are permitted to be imported obtained from trade ministry and mines and industries ministry and paying 4% importation fees of 2017.

Product's application

Generally, the goal of applying the wind turbines is to generate the clean, renewable and cheap electrical energy. Particularly, the home turbines are used to generate cheap electricity in low-populated rural regions and remote regions.

The advantages of wind turbine:

- Lack of need for fuel which reduces the fossil fuels consumption
- Wind energy is free
- Capability of supplying a part of electricity
- Cheap price of energy than the wind in long-term
- Diversity of energy resources and energy stable system
- Lack of water requirement
- Lack of large land for installation
- Employment
- Lack of environmental pollution

Plan proposed places

Based on advantages of being placed in industrial parks and zones, the Lorestan industrial park is proposed for implementing the plan.

Raw, auxiliary and consuming materials

The Raw materials and their prices are as follow.

Raw materials required, 7.2017

| Annual costs (million rials) | Unit price (R) | Consumption/year | Scale | No. required | Raw, auxiliary and consuming materials | No. |
|------------------------------|----------------|------------------|-------|--------------------|--|-----|
| 5,412.50 | - | 1,000 | No | Generator assembly | | 1 |
| 127.5 | 127500 | 1,000 | No | 1 | Shaft | 1 |
| 312.5 | 12500 | 25,000 | No | 25 | Magnetic base | 2 |

Summary of pre-feasibility studying of producing home wind turbin

| Annual costs (million rials) | Unit price (R) | Consumption/year | Scale | No. required | Raw, auxiliary and consuming materials | No. |
|------------------------------|----------------|------------------|-------|------------------------|--|-----|
| 137.5 | 137500 | 1,000 | Set | 1 | Magnetic winder | 3 |
| 2,375 | 197916 | 12,000 | No. | 12 | Magnetic | 4 |
| 250 | 250000 | 1,000 | No. | 1 | Coil core | 5 |
| 2,000 | 1000000 | 2,000 | No. | 2 | Frame | 6 |
| 25 | 25000 | 1,000 | set | 1 | Cables | 7 |
| 175 | 87500 | 2,000 | No. | 2 | Bearings | 8 |
| 10 | 10000 | 1,000 | set | 1 | Bolts and screw | 9 |
| 421.25 | — | 3,000 | No. | Blades | | 2 |
| 35 | 272 | 128,500 | gram | 128.5 | Epoxy resin | 1 |
| 16.25 | 487 | 33,400 | gram | 33.4 | Hardener | 2 |
| 312.5 | 1,838 | 170,000 | gram | 170 | Carbon fiber | 3 |
| 25 | 25,000 | 1,000 | No. | 1 | Propagation factor | 4 |
| 27.5 | 27,500 | 1,000 | No. | 1 | Sealer frame | 5 |
| 5 | 5,000 | 1,000 | set | 1 | Bolts and screw | 6 |
| 580 | — | 1,000 | No. | Turbine tail | | 3 |
| 302.5 | 302,500 | 1,000 | No. | 1 | Tail wing | 1 |
| 212.5 | 212,500 | 1,000 | No. | 1 | Tail canvas | 2 |
| 60 | 600 | 100,000 | gram | 100 | Color | 3 |
| 5 | 5,000 | 1,000 | No. | 1 | Bolts and screw | 4 |
| 20,310 | — | 1,000 | No. | Base | | 5 |
| 15,145 | 15,145,000 | 1,000 | No. | 1 | Rods | 1 |
| 4,957.50 | 4,957,500 | 1,000 | No. | 1 | Flanges | 2 |
| 187.5 | 625 | 300,000 | gram | 300 | Color | 3 |
| 20 | 20,000 | 1,000 | set | 1 | Bolts and screw | 4 |
| 967.5 | — | 1,000 | set | Electrical connections | | 6 |
| 325 | 325,000 | 1,000 | No. | 1 | Frame | 1 |
| 375 | 375,000 | 1,000 | No. | 1 | Main switch | 2 |

| Annual costs (million rials) | Unit price (R) | Consumption/year | Scale | No. required | Raw, auxiliary and consuming materials | No. |
|------------------------------|----------------|------------------|-------|--------------|--|--------------|
| 205 | 205,000 | 1,000 | No. | 1 | Rectifier | 3 |
| 62.5 | 62,500 | 1,000 | set | 1 | Cables | 4 |
| 250 | 250,000 | 1,000 | No. | 1 | Hub | 7 |
| 625 | 625,000 | 1,000 | No. | 1 | Packing materials | 8 |
| 28566.25 | | | | | | Total |

Sales plan and target market

The factory sales prices are as follow based on investigations and enquiries. Considering the lack of supply and demand in Iran, the target market would be domestic industries.

Unit annual sales

| Annual sales (million rials) | Unit price (rials) | Capacity (No) | Description | No. |
|------------------------------|--------------------|---------------|---------------------------|-----|
| 55,000 | 55,000,000 | 1000 | Home wind turbine (600kW) | 1 |
| 55,000 | | 1000 | Total | |

The nominal capacity for annual production capacity in 3 working shifts each with 8 hours working daily during 300 days per year is 1000 turbines. Since the nominal capacity of production is for ideal situations, considering the unpredictable factors such as work stop and repair and maintenance, the efficiency of this unit is 90% which is set to be 900 turbines annually.

Production procedure and technology used

In this unit, the turbine assembly operation is conducted in independent workshops. The following sections explain the workshops working process.

Turbine generator assembly workshop

The main workshop of turbine assembly is turbine generator assembly. In this section, 3 generator cores and windings are connected to each other and finally, the set is installed on the generator frame. Based on limited plan capacity, in each working shift there is one person required for taking these activities.

Blade manufacturing workshop

In this workshop, by injecting the carbon fibers into the pre-prepared frames, the blades are manufactured. Therefore for hardening, the blades are covered with resin and are put into the furnace for final shaping. In fact, for drying and shaping the blades in furnace, 2-3 hours are required. Most of the time is used in this level in process of turbine production. Therefore, in this section in order to obtain the required capacity, 10 furnaces are considered. The personnel required for this level is also 2 persons.

Excavation and welding workshop

This workshop is active in order to prepare the turbine parts such as body, sequences, base, hub, generator frame and other parts for connection and integration. Based on low level of time required for these levels, one worker is considered for each working shift.

Painting workshop

In this workshop, the base, blades and tails and other external parts of turbine would be painted and dried before final assembly.

Electrical parts assembly workshop

In this workshop, the electrical connections between generators, blades and tails of turbine are provided. In this section, one worker is considered for each working shift.

Final assembly and packing workshop

In final level, the pre-prepared parts are connected to each other and integrated and after final packing, they would be sent to stockpiles for sales.

The plan investment costs

The fixed plan investment cost is estimated as 24.490 billion Rials and the working capital is lower than 2.23 billion Rials.

| % | Total (million rials) | Required | | | | conduct ed | Description |
|-----|-----------------------|--------------------------------|----------------------|-------------------|-----------|------------|---------------------------------------|
| | | Total required (million rials) | Rial (million rials) | Rial equivalen ce | Curren cy | | |
| 6% | 1,400 | 1,400 | 1,400 | 0 | 0 | 0 | Land |
| 3% | 613 | 613 | 613 | 0 | 0 | 0 | Landscapin g |
| 33% | 8,190 | 8,190 | 8,190 | 0 | 0 | 0 | Building |
| 33% | 8,125 | 8,125 | 0 | 8,125 | 250,000 | 0 | Machinerie s |
| 7% | 1,830 | 1,830 | 1,830 | 0 | 0 | 0 | Installation s |
| 0% | 10 | 10 | 10 | 0 | 0 | 0 | Laboratory equipment |
| 0% | 0 | 0 | 0 | 0 | 0 | 0 | Vehicles |
| 0% | 87 | 87 | 87 | 0 | 0 | 0 | Service and administrati ve equipment |
| 1% | 364 | 364 | 364 | 0 | 0 | 0 | Mechanical equipment |
| 4% | 1,031 | 1,031 | 625 | 406 | 0 | 0 | Unexpected and miscellaneo us |
| 88% | 21,648.47 | 21,648.47 | 13,117.22 | 8,531.25 | 250,000 | 0 | Total fixed assets |
| 2% | 601.8 | 601.8 | 601.8 | 0 | 0 | 0 | Pre-exploitation costs |

Summary of pre-feasibility studying of producing home wind turbin

| | | | | | | | |
|------|-----------|-----------|-----------|----------|---------|---|------------------------------------|
| 91% | 22,250.27 | 22,250.27 | 13,719.02 | 8,531.25 | 250,000 | 0 | Fixed investment costs |
| 9% | 2,239.99 | 2,239.99 | 2,239.99 | 0 | 0 | 0 | Working capital |
| 0% | 0 | 0 | 0 | 0 | 0 | 0 | Other assets |
| 100% | 24,490.25 | 24,490.25 | 15,959 | 8,531.25 | 250,000 | 0 | Total plan investment costs |

The plan production costs

The annual production costs are estimated to be 40.3 billion Rials.

| Cost in practical capacity (million rials) | Costs (million rials) | Description | No. |
|--|-----------------------|--|--------------|
| 25709.63 | 28566.25 | Consumer materials and packing | 1 |
| 7540.39 | 7773.6 | Production salary and wage | 2 |
| 228.99 | 248.91 | Water, electricity, fuel and communication | 3 |
| 40.14 | 40.14 | Insurance | 4 |
| 671.65 | 730.05 | Repair and maintenance | 5 |
| 506 | 550 | Marketing and ads | 6 |
| 687.4 | 747.18 | Production unpredicted and miscellaneous | 7 |
| 1677.59 | 1677.59 | Depreciation | 8 |
| 37061.79 | 40333.71 | | Total |

Economic indices

| Value-measurement scale | Description |
|-------------------------|-------------|
| 23776 million rials | NPV |
| 39.28% | IRR |
| 2.25 years | PBP |