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1- SUMMARY

1.1 Mission

The mission of the company is to sustain, in an independent way, the technical evolution of the renewable and clean energy production.

The company will develop innovative products related with the management and the production of clean energy. It will make the promotion of its products and will conclude international agreements for manufacturing in return of small royalties.

The company will act in a proactive way to support synergy between its customers and when required, she will provide services of consulting for engineering and merchandising of theirs products.

1.2 Context

We all are aware of the problems connected to the fossils energy utilization. On one side there is the global climate warming which in the long term will completely change the ecological balance of our planet. On the other side, the depletion of stocks is unavoidable; whatever it take 40 or 60 years, humanity will have to do without fossils fuels and will have to move to other energy solutions.

There are many possible scenarios for that transition. Some said that the change will be graduate and that the renewable energy will replace in time the fossils fuels. Some other said that when the demand for fuel will exceeded the capacity, the energy price will explode and lead our society to a one or two decade of recession. The reality is somewhere in between those two vision.

Renewable energies like the wind and the sun can satisfy hundreds of times the energy needs of humanity, but they are also called soft energies because they are diffuse and difficult to harness in an effective way.

The production of green energy must thus be enforcing everywhere to reach our objective. The best strategy would be that every user became producers. We need solutions that will allow a great quantity of homes and companies to be energetically self-sufficient. The public services of electricity will then provide the additional energy demands and will act as a broker for the redistribution of the over-productions.

To favour an evolution towards the decentralization of the production of clean energy, there is only one solution:

It is necessary that the production of clean energy became profitable for the user.
1.3 Vision for the future

The conversion of an important part of the energy production used by the humanity towards clean and renewable energies will be a long-term process. In our market presentation, we will establish arbitrarily that our society will progress in a way that in 50 years 50% of the primary energy will be produce by the means of clean and renewable sources.

The lifespan of a patent is 20 years, less if we count the period to produce the prototypes, to set the market and the time for the production to reaches a rate of profitability.

Although the company will continuously produce new patents on the improvements of his basic techniques, his mission will have to be enhanced. The two poles of expertise that will have to be developed very quickly are:

1- Service of consulting that will include engineering, strategic consultation of corporative or national development, marketing tools and delivery of turnkey manufacturing plant.

2- The production for the Canadian market of some of the apparatus based to our patents. The best international marketing strategy being to show than its work at home.

1.4 Market and strategy.

Our basic markets will be developed around the first 3 patents pending of the company\(^1\) and others to come that will be also related to the development of wind turbines and management systems of energy.

Our markets must be described initially by the end users, even if our direct customers will do a good part of the production and the sales. We will produce and trade many goods, but our partners will do direct sales. Our contribution on international market will be more to licence technology, to provide business consulting and to ease the synergy within our network customers.

The markets concerned by our technical innovations can partly be describe like this:

1- We will propose to the consumers a full energy autonomy. Our offer will include an electric car, an urban wind turbine that will be able to satisfy all its energy needs and an energy management system that will maximize the profitability of the whole.

\(^1\) US. No.12/840,997 & no.61/387,603 and int. PTC/CA2010/0001480. See joint presentations.
2- We will propose to the companies a radical reduction of their energy costs. In the case of owners of large building or vast lands, their investments will even produce appreciable additional incomes. On this, we may add to the potential advantages connected to a trade market on carbon emission.

3- We will also offer to the producers of electricity a replacement solution to the establishment of farm of giant wind turbines. Our offer will produce electricity that is more economical and this, without the use of any cultivated soil, and without any impact on the communities bordering production land.

In all these cases, our strategy of setting in market will be the same: The investments that our customers will make in the production of clean energy will be profitable.

*The demonstration of this profitability will be in the centre of our marketing strategy for each level of our distribution network.*

1.4 Management

The realisation of the objectives of Wind-Do Inc. will need the development of a strong team of specialists.

As the grow of the corporation is expected to be rapid, the management and technical resources will always have to be a little head. This will lead to a more important budget on human resources, but that will be balance with an according reduction in time require for products development and setting in market.

It is important to notice that the board of directors will make all the essential decisions, which will be rich of the experiment of the Wind-Do investors.
1.5 Financial aspects

The company is fully aware of the vast potential of its products. We are also conscious that the expenses for development and for setting in market of each market segment will be high.

Before being able to generate incomes from direct sales or royalties, the company will have to finance with its own capital the following activities:

1- The legal support and the general administration expenses connected to the intellectual property. This includes the deposit of patent applications in a number of countries to being given. This activity will require an original investment between 500 and 750,000$. Because of the nature of the company, these expenses will be recurrent on an annual base.

2- Establishment of a factory-laboratory that will be used for the development of the prototypes and the optimization of the various models of wind turbines. A space of approximately 2000 square meters could be rented or bought at an annual cost from approximately 180,000$. The installation of a low speed wind tunnel and the purchase of the equipment for the factory, the office and the laboratory will involve an investment between 750,000 and 1 million dollars.

3- The development of the prototypes and their optimizations will be the most important part of the basic investments. Flowing figures are approximated and represent more one order of magnitude of the needs that an exact values. Amounts considered included the labour and accessories connected to the projects.

   a) The preliminary development and the production of a hundred modular batteries will cost approximately 250,000$. The production of a first marketable model and the manufacture of two or three thousands of those units will cost approximately 1 million dollars.

   b) The preliminary development of an energy management and storage unit for the use of 50 modules of batteries, and the manufacture of 5 prototypes will cost more than one million dollars. The optimization software and the development of the firsts marketable units, as well as the production of about fifty units for several applications will also cost nearly a million dollars.

   c) For end of demonstration, we will convert an existing car into electric vehicle equipped with our system of modular batteries. By using an existing hybrid car, the cost should not exceed 200,000$. Thereafter it will be necessary to convert a bicycle, a motorcycle and a motorized wheelchair to complete our demonstration, for an additional expense of 125,000$. If thereafter we can convert cars at a lower cost than 75,000$ each, we will produce five to ten of those vehicles for demonstration and testing.
d) The development of the wind concentrator turbines will begin with studies of the general parameters of wind concentration. Excluding the cost of wind tunnel already figure, this expenses will be approximately 250,000$.

e) The development of the urban wind turbine will be done by the production of the two basic models, the trapezoidal and the cylindrical one. Each prototype will cost approximately 200,000$ to manufacture and 25,000$ to install on the roof of our factory. The second prototypes, which will be close to a marketable product will cost approximately 100,000$ each; they also will be analyzed and installed. We will produce five marketable wind turbines of each model and those will be installed at various places for analysis and demonstration in real situation. The unit costs of each installation will be approximately 60,000$.

f) The development of the rural wind turbine will be made in a similar way. The development of the basic model to the installation of about fifteen demonstrators will cost approximately 750,000$.

g) The development of the basic model of the wind deflectors with also cost approximately 125 + 25,000$. We will have to develop the optimization programme to manage the angle of attack of the deflector, for a cost from 50 to 100,000$. We will also have to manage the development and the deployment of the first carrousel; to go up to the installation of a carrousel with 15 to 25 deflectors on the roof of a building, it will be necessary to invest another 1.25 million dollars.

h) The development of the corner wind turbine for the tall buildings will also cost up to 1.25 million. This will achieve the installation of a first network of wall turbine on a building.

i) The development of a system to manage the energy of a network of wind turbine to produce alternative current synchronized with the network will cost about 250,000$ for the original prototype. The manufacture of a marketable apparatus and some demonstrators will cost also approximately 250,000$.

4- The administration and general expenses connected to the operation of the company will be lower than 1 million the first year and will slightly exceed the million the second year.

5- The expenses connected to the communication and the marketing will be around 200,000 dollars the first year. The expenditure will exceed two millions dollars the second year as it will be necessary to present our products in several

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2 Develop alone, this expense should be higher. Each wind turbine development cost is reducing by the production of a family of products.

3 This projects is not details in appendix, as is patents are not registered yet.
international exhibitions to build our reputation. Those expenses will be growing thereafter.

The company will have thus to invest approximately 15 million dollars before where being able to generate incomes from our developments. In this context, we must reach a capitalization of 18 million dollars to be able to carry out the development and the marketing of all our products. You will find in appendix the financial pro-format.

2- THE PRODUCTS

2.1 General description

We must clearly separate each branch of industry where we expect to act and detail at which level we will get involved in each case.

Our two principal branches of industry are:

1- The management systems of energy.
2- The development of specialized wind turbines.

Our interventions in these sectors will be:

a) The research and development of new products adapted to the needs of our branches of industry.
b) The marketing of our patents and technical drawings to ease their diffusion and the establishment of related royalties.
c) Services of consulting connected to the development of products based on our intellectual property, the development of strategy or feasibility study, the adaptation of promotional tools and manufacturing process.
d) The promotion of synergistic relations between our customers and partners.
e) The fabrication and distribution of some of our products for our national market.

2.2 Range of products

Energy management systems

Our energy management system is centred on the use of standardized modular batteries. Physical dimensions and property will be registered as technical drawing and our first role will be to make this standard adopted by the industry.

These piles will be used in energy management apparatus that will include from 2 to 5,000 batteries used in an alternative way. This management system, like any computing
system, is composed of an assembly of electronic devices connected to the box receiving the modular piles (the hardware), and of the computer program ensuring the optimal management of the piles (the software). These two components will be regarded as independent products, each one being the object of separate intellectual properties.

The quantity of apparatuses using our management system of energy will be the success key for the marketing of this family of product. Dependently on partners who will bind to the destiny of Wind-Do, we will produce experimental prototypes of electric cars, motorcycles, boat and other home or industry applications.

Wind turbines with wind concentrator

We will produce prototypes of wind turbines and we will optimize them up to high quality products. Our basic installations will also be used for the production of small amounts as apparatuses. We will thus be able to offer complete manufacturing drawings and specifications for; purchases, suppliers, equipment of production and matrices. Our manufacturing expertise will also enable us to provide factory layout, training of personnel, promotional tools and eventually the production of turnkey factories.

We will produce three families of wind turbines, as described above.

The urban wind turbines will be divided into two principal models, the trapezoidal and the cylindrical ones. The basic commodities will harness between 15 to 20 square meters of wind, which will be adapted for energy needs of a single residence with an electric car. Other models of 30,50 and 100 m² will be produced for commercial applications in urban environment.

The rural turbines will be optimized until the development of a single model which will provide the best ratio ‘harnessed wind/cost include installation’. Optimization will be maximize as this model is intended to be manufactured at the rhythm of several hundreds units per day.

The building wind turbines are intended to be used for custom applications. The basic offer will include wind deflectors on carrousel for the roof and two models of corner wind turbines for the wall of tall building. Every installation will need specific design and we will manage quality control of every project. We will always require the collaboration of consulting engineers to establish potential of building and supervised the installation.

2.3 Products development

We have described in introduction the developments of product that are necessary in the first 2 years of the company.
The development of product will be largely conditioned by the objectives of the firsts shareholders who will invest in Wind-Do:

- If we have a manufacturer of battery as shareholder, the development of the modular piles will be done jointly, but mainly by this investor. The rights that will result from this venture will be shared, like the expenses. On the other hand, the products offered will be marketable directly, and the range of products will be wider at the beginning. For example, we will be able to offer an economic module for stationary energy management system, and both a module of high efficiency and a super condenser to be used in the motorized vehicles.

- If we have an electronic manufacturer as partner, the development of the material for energy management will be made jointly, mainly by this shareholder. Here still we could offer marketable products directly, for example management systems of energy for an electric car using 100 modular piles including a choice of option on the number of super condenser used. Another model for small vehicles that could use 30 piles and 2 condensers. We will also be able to propose management systems for the houses and light industries.

- The development of the energy management software will also be dependent on the shareholding. Here Wind-Do will need a more direct control, as constant updates will have to be to make with the arrival of new piles and new applications having all their specific operating features.

- The production of electric vehicles for demonstration will also be conditioned by the partnership of the company. If we have an automobile manufacturer as partner, this one will require that we transform his models first, but with its collaboration, the results will be more impressive. The same comment applies to a manufacturer of off road vehicles or boats.

- We will do all the development of our wind products as none of the current manufacturers is focussed towards production of our type of apparatus. If we have producers or national distributors of electricity as shareholders, those will privilege the development of the rural wind turbines because they will have an immediate use for this product. An accelerated development of the rural series will not delay in an important way the others wind projects.

In all the cases it will be clearly established with all the shareholders that developments carried out are intended for diffusion. Although their partnership brings appreciable competitive advantages to them, it will never be question of exclusiveness. The mission of Wind-Do being the diffusion and the promotion of technologies connected to clean energies.
3- THE MARKET

3.1 General definitions

In the context of a preliminary business plan, it is more important to establish a relative size of a target market than it exact and checked values. For example, the 50 larger manufacturers of the planet have built 56 million cars in 2007. For the need of calculation, we will estimate that this level of production will remain constant. Even if a growth is probable, we know that in short term the fabrication will not pass to 25 or 125 million cars per year, we thus have an order of magnitude to estimate that market.

Energy management systems

In the research for solution to hold back the greenhouse gas emission, the cars will be the first targets where the public could be put at contribution. In a context where technology will allow it, thanks to our system of modular piles, a healthy objective would be that 30 to 40% of the cars produced in 5 years are electric or hybrid refillable, and 80 to 90% of the cars produced in 10 years. We will be more realistic and will estimate that we will pass to 40% in 10 years, without important result the first 3 years, and to 80% in 15 years.

We thus estimate at 22 million the number of electric cars that could be built in 10 years. If we manage to enforce our technology like standards of production, which is realistic because it is the only applicable solution in a universal way for the moment, more than 80% of those electric vehicles will use our system of modular piles. Dependently of our choices of deployment for our patents, from 5 to 15 million of those cars may produce royalties.

Of the 22 million electric cars sold in 10 years, we can estimate that 80% of those will use an average of 50 modular piles each. A big part of the users will also install a management system of energy in their house. They will need an average of 25 additional piles there, often more if they associate this investment with a renewable energy source. Finally, each sale of vehicle will cause a comparable increase of piles inventories in commerce of energy distribution.

We thus estimate that in 10 years the annual production of modular batteries intended for the car will reach 1.7 billion units. With the production of the other kind of vehicles and the industrial applications, we can double this quantity, which itself will be doubled 5 years later.

It is clear that such a quantity of batteries could not be produced with only one technology of electric accumulation. That reinforces our position because our system can simultaneously use dozens of different piles technology.
Wind turbines with wind concentrator

Humanity annually consumes 11.3 billion TOE (Ton of Oil equivalent) in primary energy\(^4\), which represents an equivalent of 136 billion Megawatts hour\(^5\). This primary energy is produced to 11.8% by the means of the hydroelectricity and the nuclear power\(^6\), the 88.2% remainder come from the combustion of fossil energy.

With the grow of the countries in development; there will be no fall in the energy demand\(^7\). To get away from a planetary ecological catastrophe and from the forthcoming depletion of fossil energy, humanity must carry its production of clean and renewable primary energy to a minimum of 50% of its total needs. To be effective to reduce climate warming, this search of 52 billion MWh/year. should be done over 20 years, but we will base our projections over a more realistic period of 50 years.

Annual production of 52 billion MWh. requires an average power of approximately 6 million MW. We will establish an approximate size of the necessary investments by the calculation of this energy production with wind turbines of 2 MW.

In a good site, a wind turbine will produce an average of 30% of its nominal capacity; to reach a continuous power of 6 million MW we will thus need the equivalent of 10 millions of those 2 MW machines. This level of implementation is realizable; if we consider that the emerged surface of planet is approximately 150 million square kilometres, we would have then one giant wind turbine by 15 square kilometres.

A 50 years program thus requires of humanity to install 200,000 wind turbines of 2 MW per year, for an approximate investment of 1,200 billion dollars (Canadian) each year.

At scale of the province of Quebec (+ 0.8% of the energy needs of humanity) that involves an annual investment of 9.6 billion per year, or 1,600 giants three-blades.

Those require annual investment is not there yet and it will be reach only few years after the base price of the crude oil will have past for good the 150 US$ per barrel. This issue is an unknown variable of the market that damper actual investment.

The wind electricity is only one the renewable source of energy; many other solutions are and will be offer. For example, the province of Quebec will continue to invest annually between 1 and 2 billion in their hydroelectric development.

Another point of the forthcoming market that we want to mention is the high competitiveness that will occur from the diverse offer of renewable energy. It is clear that at that level of investment, the governments will not be able anymore to support the

\(^5\) This is approximation as conversion of TOE varies from different primary and used source.
\(^6\) This review does not take in account other renewable energy sources, which count for 2% of overall primary energy.
\(^7\) In fact, Montreal congress on energy, in 2010, forecast that the overall energy needs for humanity will be the double in 2050.
deployment with subsidies. At this point, only the most cost efficient energy production will grow in this huge market.

The positioning of Win-Do in this market will be support by two points:

1- We will offer to the grid, true our rural wind turbine, an energy production that will cost 50% of the one produce by giant wind turbine.
2- A direct reduction of energy cost to end-users. This will be sustaining by our urban wind turbines, our building wind turbines and their supporting energy management system.

This is why we think that Wind-Do will be and will stay head in this market.

To reach the above mention level of investment, funding will come from many sources:

- The national electricity distributors, or their energy suppliers.
- The farmers, which will reduce their energy expenses and will diversify their revenues.
- Companies, which will reduce their energy expenses and may in some case gain carbon points.
- Private individuals who will free themselves from the energy expenditure of their vehicles and their house.
- Owners of large buildings, which will also reach a certain energy autonomy.

3.2 Target customers and development strategy

In our marketing objectives, it is important to identify our directs customers, those we will invoice, and the end user that will make the purchasing decision.

Our marketing strategy must then touch our potential distributors, contractors and licensed customers, and the public in general that will wish, in small or large scale, be more self sufficient with their energy needs. It will be important to be present at a maximum of trade fairs connected to the environment and to keep inform specialized newspapers of our developments and objectives.

Energy management systems

In all our strategy connected to the use of our modular piles like pivot of a healthy energy management, the most difficult stage will be to convince a first manufacturer of car to use our system.

In the preamble, we mention that we want to transform few existing cars into electric vehicles. We will intentionally use series models to make sure the car manufacturers understand that they do not have to one; change their structures of marketing or their niches of product to sell electric cars, and two; that many existing lines of assembly could
be converted to produce electric car at a reasonable cost. The best scenario would be to transform a Smart, a Malibu and a Corvette\(^8\) by preserving their basics performances.

We will then be able to highlight some specific advantages to the use of our system:

1- Economically, the production of an electric car will be less expensive than a hybrid vehicle. The car will have only one power engine, and this one is simpler and more economic than a combustion engine.

2- The economic advantage will be even more outstanding with regard to the selling price. In addition to a more economical fabrication with the used of only one engine, this motor will not use a panoply of peripherals to work, for example a starters, a radiators, a water pump, etc…. Moreover, batteries will not be sold but rented by a public service; we thus have a car having the same dimensions and the same performances as the original model but at a lower retail price.

3- The need to standardize the source of energy for the whole of industry is also essential to ensure the perennially of the market in its current structure. Currently there is oil as a common energy source. Our modular system can achieve this function for the electric vehicles, and the existing service stations will easily be able to provide the two energy sources without major investments.

4- Currently there is no existing system that gives possibility to reload an electric vehicle in 5 minutes.

5- The use of our system, of which we will ensure the standardization and the update, will be very economic since we estimate at 10$ per car the royalties which we will require.

Our general objective will be to make of our modular batteries system a standard for all portable energy requirements. To do so we will not charge any royalties for minor applications such as bicycle, lawn mower, wheelchair, etc… Moreover, the rights on motorcycles and sport vehicles will be very low, between 3 and 6 dollars.

Our principal incomes will come from the rights on production of the standards piles. Even with an invoicing of 10 cents per unit, we will amply finance the promotions and the update of our systems.

There remains the establishment of the management systems of energy in the houses and the companies. Here again the royalties we will require will have no impact on retail price.

**Wind turbines with wind concentrator**

The marketing for our wind products will be structured differently.

Initially we will have to manufacture several of these wind turbines up to the level of the marketable product. We will have then to sell and install them a good quantity so we can

\(^8\) Registered trademark.
build the confidence of the customer’s base on the performances and the reliability of our products. Verifiable efficiency will place us in good position both for our local market and for the establishment of and international network of licence producers. Our local capability will also place us in good position to sell marketing and engineering services, the whole with an aim of establishing a relationship with our customers that will exceed the 20 years of protection of our patents.

Our strategy for the first 18-24 months will be thus to develop conscientiously the necessary tools for production, installation and marketing of our energy production system.

Concepts of sale will be established for public services, corporations, farmers and private owner. Without pre-establish in advance the needs and requests of our customers, it is probable that:

- The public services will wish to buy products installed and directly connected to their networks. Our direct customer will thus be electrician or foundation contractor, but it may also be independent electricity supplier.
- The companies will want to associate their networks of wind turbines with an internal management system of energy. Some will directly do their installation; others will wish to buy turnkey systems.
- The farmers will tend to install their network of wind machines themselves in their dead season. Basic formation for installation and maintenance will be necessary and financing solutions adapted to their needs could also be an important factor of sale. The pre-sale of their surpluses of energy will also be an asset.
- The individual sale of urban wind turbine will have to pass by a network that will be established and reliable. The best way could be to sell total energy autonomy to the new purchaser of an electric car. The best network of sale could then be the car dealer. The timing is excellent because several of those retailers seek for complementary markets. Here also an adapted financing system will be a key factor for sale.

3.3 Competitivity of our offer compared to the market

In the definition of the size of our market for production of clean and renewable primary energy, we present assumptions that do not seem in agreement with the realities of the current market. A fast analysis indicates that even if all electrical energy currently produced came from clean and renewable sources, we would be still well below the announced figures.

It is a fact; our real objective is to create a context where almost all the applications using fossil energy could be converted to clean energy in an advantageous way for the user.
The conversion of cars towards electrical energy is a first step in this direction. Clean electricity should become so attractive that both heating and commercial transport (trains, boats and planes) will convert in a natural way to this source.

*Here is why Wind-Do will made wind energy so economical that it will become an incentive for the conversion of existing systems towards electrical energy:*

Contrary to the hydroelectricity, which can be modulated with the requirements, the wind is available in a random way, therefore in an asynchronous way with our needs. When wind energy will becomes one of the major sources of electricity, we will attend a scenario where there will be important surplus of energy the night and even occasionally the days of high wind. The public services of electricity, which will also have become brokers of energy with thousands of suppliers (firm, companies, residences, etc) will have to modulate their selling and purchases prices according to the periods of requests, for example:

<table>
<thead>
<tr>
<th>Schedule</th>
<th>0 to 6h</th>
<th>6 to 9h</th>
<th>9 to 15h</th>
<th>15 to 19h</th>
<th>19 to 24h</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling price per KWh</td>
<td>.035</td>
<td>.12</td>
<td>.10</td>
<td>.12</td>
<td>.06</td>
<td>.081</td>
</tr>
<tr>
<td>Buying price per KWh</td>
<td>.025</td>
<td>.11</td>
<td>.09</td>
<td>.11</td>
<td>.05</td>
<td>.071</td>
</tr>
</tbody>
</table>

This scenario will sustain:

- A spreading out of the electricity demand, for example the heating of the houses, greenhouses and commercial buildings will be maximized the night.
- The sale of management system of energy, and the sale of modular piles of average power. With this schedule, it will be profitable for a system owner to accumulate electricity by night and resell it at the rush hours.
- The batteries of cars will be firstly reloaded the night.
- The low costs for production of hydrogen by night will support the conversion of the commercial transport towards this form of clean energy. With proven oil reserves of approximately 42 years⁹, this conversion is not an ideal but simply a necessary evolution.

*Did the selling price of wind energy can follow this scenario?*

As wind is free, the cost of wind energy include only three components:

- The damping of the cost of the machine including its installation.
- The interests paid for the financing of the installation.
- The maintenance and administration costs.

Those expenses are fixed and easy to establish in advance, it remains to divide them by the quantity of KWh produces annually to have the production costs for this energy.

In the case of a wind turbine of 2 MW, the investment varies between 5 and 6 million dollars, dependently of various factors. We will amortize this investment over 25 years with an interest rate of 5% and estimate the maintenance costs to 50,000$ in the case of the administration of a park of wind turbines. This give us an annual cost between 400 and 475,000$ per annum. The sites currently chosen generate more than 5 million KWh per annum, which give us a production cost between 7.6 and 9.1 cents per KWh. Some good sites would generate electricity at 7 cents per KWh, but the majority of the sites without particular wind would generate costs between 10 and 15 cents per kWh.

Those giant wind turbines cannot be profitable with above tariff scales.

Our standard rural wind turbine of 21m$^2$ would have a nominal output of 10 KW$^{10}$. We have two scenarios of installation:

a) If a farmer installs itself his network of an hundred wind turbine and do his own maintenance off season; he will have a cost of establishment estimated at 9,000$ per unit for total operation expenses of approximately 750$ per generator per year. A good site will produce more than 26,000 KWh per year$^{11}$, for an average cost of 2.8 cents per KWh. More or less windy sites will make the costs vary between 2.0 and 3.5 cents.

b) In the case of a company committed to electrical production for the national distributor, to install wind turbines along the roads will cost approximately 10,000$ per unit and its maintenance costs will be higher. With annual expenses of approximately 1,000$ per machine, the electricity production cost will vary between 3.0 and 4.5 cents per KWh, dependently on the quality of the wind of the sites used.

In both cases, the investments will be very profitable, even with sites having a lower average speed of wind. A more details production cost can be seen in appendix.

\[10\] Equivalent to the output of a tri-blades generator of 21m$^2$, we expect our apparatus to be more efficient.
\[11\] Same remark.
4- MARKETING STRATEGIES

4.1 Positioning

Wind-Do must present itself as a factor of change in the energy world and as a resource for all the individuals and organizations involved in those changes.

We already have established that the mission of the company will be to support progress of clean energy utilization to all levels. Our staging, which will have an important media component, will be centered on the presentation and the promotion of concrete technical solutions with immediate applications.

This positioning, as promoter of solutions, will have to be continuously supported by the image of a team of specialists dedicated to the sharing of their experiences. It is important that all perceive us as an organization that can provide support as well at the technical level as for any other organizational needs.

If our basic positioning is well planned and it has achieved their goals, we will have little solicitation to make. The development of our network of customers and partners will mostly be done base on requests.

Ideally, we will try to present us as the center of a network of partners where our mission will be to support the synergy and the exchange of technology. A constructive approach would be the production and the promotion of a logo symbolizing the participation of their users in the collective effort for the development of clean energy. Our partners and customers could use this logo as a symbol of the quality of their environmental steps, while taking part in the promotion of our image.

4.2 Marketing plan.

Public promotion of ideas or products requires the use of several communication networks that can prove to be expensive.

Our plan of marketing must thus envisage the participation of each business partner in the whole effort. By their home way or by the means of material that we will provide, our customers will have to promote our products and philosophy in their areas and in their branches of industry.

Our marketing plan will thus include 3 phases. Initially we will form the core of basic partners with whom we will develop our products and we will structure our concepts of marketing. The second phase will require a coordinated marketing effort of each partners to create a large media impact which will establish our name and our brand mark of environmental quality assurance. The third phase will consist in making sure that each
one of our customers make is part in the global effort of setting in market, as much for them that for us and our network.

4.3 Penetration objectives.

We previously established that the markets concerned were colossal. To establish in a preliminary plan of business some precise targets of market penetration could carry to confusion.

*It is on the other hand important to establish that our level of penetration and the control of the changes of market we will cause in the world of energy will be strongly related to the financial efforts we will be able to make to do it.*

Two aspects will be determining in our strategy; the level of effort that we will be able to granted to the structuring of our intellectual property and the speed with which we will be able to establish our position of international leader in our field.

Correctly protect an invention may require the deposit of several patents and draftsmanships. The world costs for the registration of a patent can vary from 50 to 200,000$, dependently on number of countries that we will wish to be covered. Those get 20 years of legal protection for the use of the establish innovation, but only for the countries where we will have recorded our inventions.

A position of international leader will get us an authority of competence, which makes possible to establish long terms business relations without territorial limitation. However, this leader position will need a continuous investment both in R&D and marketing.

We will have to convince our customers that they will draw more benefit to use our services and to belong to our technological survey, compare to try to go for it alone just for the saving of small royalties.

A good utilisation of these two strategies, including a rate of royalty that will be low enough so it will not influence the selling price of the products, should enable us to take and keep the control of our niche of market.

4.4 Key factors for success.

We have shown potential profitability of our project for each one involve. Our success will depend on our aptitude to rendering comprehensible for everybody the benefit they will get from their adhesions to our program.

To create a well-structured networks of partners and customers, a synergy between everybody who is involve will be necessary. We will have to be proactive in this way.
5- THE CORPORATION

5.1 Organisation

The organisational structure will vary with the growth of the company. It will be important to balance the needs for additional structures required by the growth and the financial resources available. The shareholders, by the means of the board of directors, will approve each stage of growth of the company.

The research and development department

The people assigned to the departments of research and development will have several specific mandates:

- The production and the optimization of our prototypes.
- The technological monitoring of all that has a link with our lines of products and our markets.
- The drafting of all the technical documents (Parts, maintenance, assembly, installation process, etc.).
- Support the consulting department and training of its specialists who will all have their basic formation in R& D.

Energy management systems

The prototypes of this section will mainly be manufactured by sub-contracting. This section will thus begin with only two permanent employees. The first one will be specialized in the electronic control devices, for the material (hardware) and the other will develop and keep update the programming (software).

Wind turbines with wind concentrator

We will manufacture our prototypes of wind turbine, we will optimize them in our wind tunnel and we will make sure to remain the leaders of this branch of industry. Thus, there will be more personnel assign to this section.

This department will be directed by an engineer specialized in the fluids mechanics. The personnel will vary according to the mandates but will be very mobile because often transferred to the technical supports service or to consulting department
Purchaser. The purchasing will be done under the responsibility of the department of R&D. The first purchaser will be a senior technician or an engineer that will also have the responsibility of technological monitoring.

The department of marketing and public relation

There will be two specific sections for ‘sales and marketing’ and ‘public relations’ as they will both have important functions for the company. Each section will have its director; they will work in team and for the beginning they will both refer to the general manager.

The public relations will have three priorities:

- The relationships with the press and the publication of official statements; this work will be ensured by the director.
- The development and the continual update of a Web site, including blogs for questions and technology exchanges; those tasks will occupy a full-time employee. This person will also ensure the maintenance of our internal computers network.
- The presentation of our products in trade fairs will also require a full-time coordinator and some part-time employees.

Marketing priorities will mainly be:

- To negotiate the agreements with our local distributors for the sale of the wind turbines that we will manufacture.
- To negotiate with local and foreign manufacturers for the production and sale under licence of our products.
- To develop the tools for the sales and the promotion of our ranges of apparatus and services, including marketing material that could be used by our customers.

Those various functions will be assumed by the director at the beginning but quickly some assistants will be added to the team of sale/marketing.

The administrative support

The administrative support will be ensured by an experimented director, which will have the following responsibilities:

- The accounting that will require personnel according to the size of the company.
- The management of the financing and the liquidities will be assumed by the director.
- The management of the intellectual properties will be assigns, including the management of the contractual agreements and possible legal conflict.
- Human resources will probably be managed in house.
- Follow-up of all the administrative obligations of a corporation.
Preliminary production

At the beginning, our workshop of research will also be used as factory for the first productions of wind turbines. We will have, after approximately 10 months, a team that will assemble the apparatuses in our facilities and one that will install them on the selected sites. The research department will assure the layout and implantation of our first large factory of production. Thereafter this workteam will be specializing with custom size production for large building. This research/production facility will also be used for the training for the technical personnel.

The consulting department

The department of consulting will take up duty approximately 18 months after the beginning of the operations of the company. It is difficult to estimate which size it will be in the lines of business, or how many people it will use. The members of this multi-field team will be our ambassadors at the international level; we will recruit the best professionals to form it. As our mission lead to a continuous support to our customers, the projection of a hundred employees after five years is a reasonable expectation.

The manufacturing plant

The start-up of a factory that can produce 300,000 wind turbines per year may take between 5 to 10 years before it is became necessary for the Canadian market. We will estimate that our first factory, which will be start between 18 to 24 months after the starting of the company, will have a production capacity of 30,000 units annually.

With a unit selling price from approximately 6,000$ for a rural wind turbines and 14,000$ for an urban one, our capacity of manufacture will reach 200 million dollars per year. As most of the components will be subcontracted for this level of production, we can consider labour (including administration) at approximately 20% of the selling price. When this factory will reaches full capacity production, it will need approximately 800 employees, using an average salary of 50,000$ per year. Needs for similar labour force will be necessary both up and downstream.
5.2 Calendar of realization

The first day of our calendar begins with the confirmation that the necessary capital is available and that a part of it is spent. The rate of realization of the objectives described below is related to the financing of the project as described. Other more modest scenarios of investment may be used, with results of more spread out in time and the probability to lose the initiative to position Wind-Do as a world leader.

The research and development department

The development of the elements connected to the energy management system will be done by subcontracting. Work will begin after the recruiting of the project manager, which should be approximately a month after the day one. We estimate at 3 months the production of the first prototype of modular pile, and 1 additional month to have a sufficient quantity of piles to form a network. We will be able to begin the conversion of our first vehicle about the 5th month. We will have sufficient element to make or first media presentations between the 10th and the 12th month.

The developments connected to the wind turbines will start with the establishment of the wind tunnel and the other facilities of the factory, which will take between 3 to 4 months. The elements necessary for the analysis of the more effective rate of wind compressibility will be already prepared; this study will take approximately 1 month. Thereafter we will need between 3 to 5 months to produce the first prototypes of each family of wind turbines and another 3 months for prototypes that can be installed on the roof of our factory. The presentation of the first families of products could thus be estimate between 10 to 12 months after the opening of the factory.

The department of marketing and public relation

The department of public relation will have to be set up somewhere within the 6th and the 8th month so that we are ready for our first presentations expected for the 12th month.

The director of marketing and sales will have to be committed about the 10th month to be ready for the first trade negotiations at the beginning of second year.

The administrative support

The administration director will be the first employee of the company. We will decide at this time if human resources will be assigned.
**Preliminary production**

The instruments, matrices and personnel necessary to the preliminary production will already be in place when they will become necessary, that is to say approximately 12 months after the opening.

**The consulting department**

The consulting department will become necessary as soon as we start to export our technology. It will be created as autonomous section when our first production factory of wind turbines will be financed. The first mandate of this new department will be the establishment of this first factory and the optimization of its mechanisms of production.

**The manufacturing plant**

The operational start-up of the first manufacturing plant of wind turbines will depend on two factors; it’s financing and an agreement of energy purchase with Hydro-Quebec and/or Hydro-Ontario. The negotiations relating to the financing and the size of this first factory will be done between the 12th and the 18th month, for a construction will start before the end of the 2nd year.

**5.3 Localization**

There is no pre-selected site for the establishment of our first factory-laboratory.

Here are principal’s criteria:

- The factory will have to be in an industrial park so we will be able to install some rural wind turbines on our land.
- The building will have to be high enough to be able to shelter the wind tunnel; a ceiling at 10 meters or more is necessary.
- It must be close to a vast basin of qualified labour and engineers.
- It must be close to an international airport to ease our company mission.
- The establishment in an existing and free factory is necessary to accelerate the beginning of the operations.
6- FINANCIAL PROJECTIONS

Warning: The financial projections described in this preliminary business plan do not represent firm financial objectives but orders of magnitude of the implied amounts.

6.1 Description of the financing projections

Financial projections are based on anticipated income and expenses of the project. Most of the expenses are related to the investment and the business plan that will be approved by the shareholders. Those expenses are relatively fixes and could be consider as very reliable. Revenues are more speculative. Base on market knowledge and estimate competitively, the forecast sales may vary in many ways. The main financial projection sheets are thus building with conservative sales projection. Details analysis will include results from low, very low and higher sales results.

Financial projections have been divided into several tables to simplify the presentation. Those tables are presented in appendices 6.2 to 6.7

Appendix 6.2 described the source and the use of the funds for the starting period of the company. From this table we can deduce that opening assessment will be:

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>LIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short terms assets</td>
<td>17.2M$</td>
</tr>
<tr>
<td>Long terms assets</td>
<td>1.8M$</td>
</tr>
<tr>
<td>Financing</td>
<td>1M$</td>
</tr>
<tr>
<td>Shareholders equity</td>
<td>18M$</td>
</tr>
</tbody>
</table>

Appendix 6.3 details the sales by market segment. All the appendices of pro format projections are presented the same way, in three parts:

- For the first 3 years, the quarterly ventilation.
- The annual details for the first 10 years.
- A list of explanatory notes for each line.

Appendix 6.4 described the direct expenses and the standing fixed overheads connected to the operations of the company. This approach makes it possible to highlight the evolution of the dead point of profitability.

Appendix 6.5 described the investments related to the R&D activities and the setting in market of the various ranges of product offered. Direct link may be established for each market segment with appendix 6.3. The second part of the appendix describes the profitability before and after those compressible expenses and amortization.
Appendix 6.6 described the operations of the monetary flow. The first section calculates the liquidity generated by the operations of the company. The second part describes the financing activities and other elements like the increase in inventory or the purchase of equipment.

Appendix 6.7 described the evolution of the assessment.

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