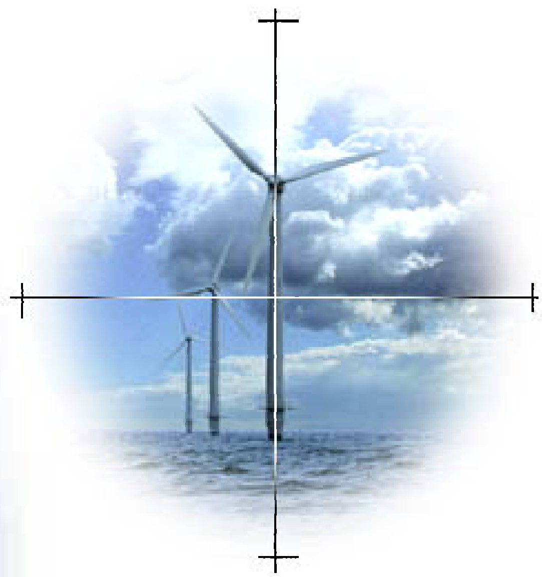
EnerQuest Power Development Corporation

The Gust of Change

France Wind Technologies

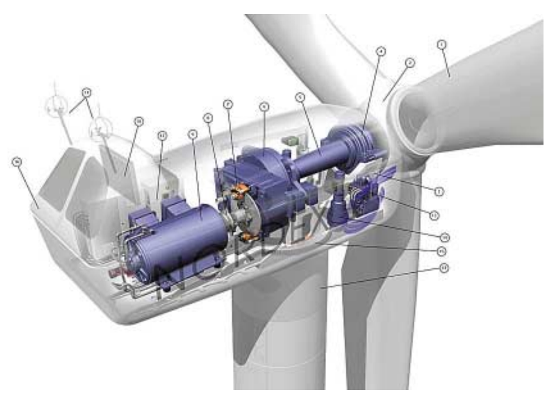
JOINT VENTURE:
Wind Power Development Project
United State of America.
- PROPOSAL -



I. ACKNOWLEDGEMENT & EXECUTIVE SUMMARY

First of all, we would like to thank the *Enerquest Power Development Corporation* for this Interesting Project.
We also would like to thank the Toulouse Business School, and our acknowledgements are especially intended for M. Maria Sanjaume for her support, and her advice.
Finally, we would like to thank our staff who have worked on this Joint Venture and who have made it all possible.

In this proposal you will find the response to your RFP dated October 22, 2001. We have developed two main projects which are developed around two strategies of our company: the Security and the Innovation. We would appreciate your comments on both, and in particular on the one which corresponds best to your corporate strategy.
The Structure of this proposal is described in the following table of contents.



II. TABLE OF CONTENTS

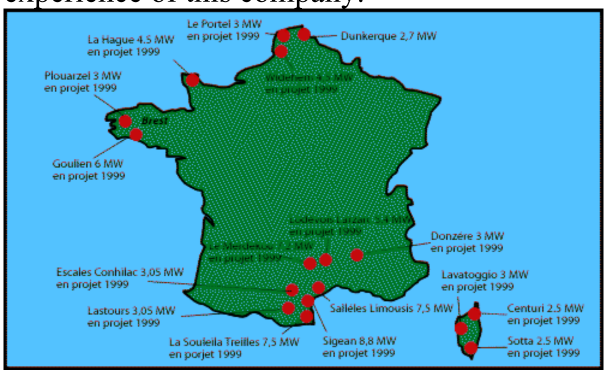
III. PRESENTATION OF THE COMPANY

III.1. HISTORICAL

The France Wind Technologies (FWT) was created in the mid 80s by six students just after their graduation of the Business School of Toulouse. This company employed 6 people and was installed in the city of Toulouse.

Nowadays FWT is the major French wind farm manufacturer with 3 production sites in France, and 25 around the world. The 2500 people employed by FWT are specialized in their fields of activities and are able to handle the biggest projects that our customer may require.

During these 15 years, FWT had installed 25% of the World-wide Wind Farm, and have already planned to take 33% of all the present projects, because of the technology and experience of this company.



French Sites in which we take part.

III.2. SHAREHOLDERS, JOINT VENTURE AND CUSTOMERS

Even if the 6 creators of FWT still have the control of the company, the fast growth of the company must be supported by the entry of Shareholders.

The two main shareholders of FWT are EDF, which is the French supplier of electricity, and Framatome, which is the French leader in electricity equipment.

In order to extend our activity to the international we have created some Joint Ventures with other foreign companies such as Vestas, Nordex, Enron

Even if we already have one of the best research centers in the world, we are in constant contact (by partnership) with the National Wind Technology Center (in USA), the CRNS (in France), and various Universities around the world. That allows us to have the latest technologies and innovations that can be applied in the Windmill Area before our competitors.

Even if for the last 5 years we have focused our production on Wind Farm with a minimum of production of 20 MW, the range of our customers is still wide with: EDF, Vestas, India National Electricity, Denmark Electricity, Australia Wind Farm Corp

III.3. Our Products


Even if FWT is fundamentally a manufacturer of Wind Turbines, it can respond to clients' needs with a complete "turnkey" Construction of complete Wind farm.
As the products of FWT are made with the latest technology, we always advise our customers to take our services to operate and maintain the wind farm in which we take place.
Our Range of products has been developed around two main categories of products:

- Traditional and well-tried wind mills.
- Innovative and top of the art wind mills.

The production capacities of our wind turbines are the following: 400 KW, 900 KW, 1500 KW, and 2500 KW.
ref. Appendix 1: pictures of various products of France Wind Technologies.

III.4. The Managers of FWT concerned by this Joint Venture

- Business Development: Nicolas BONAFONTE.
- Financial: S bastien ROCHE.
- Environmental: Sylvie CANTET.
- Quality and Maintenance: Stephanie LEBLANC.
- Technology: Pierre GALLAND.
- Design: J rome FRITSCH.

IV. OUR RESPONSE TO YOUR RFP

IV.1. Introduction

The selection of the site is very important. It has to be selected very carefully to choose an area with a good wind potential, an easy access, and the possibility to connect to electricity grid.
That's why the selection of the site takes a relative long part in our proposal.
In this part, you will also find our technical offer, which is particularly adapted to our location constraints.

IV.2. Choice of the Location

The location of **Tehachapi Mountains** for the wind farm was selected based on several criteria:

IV.2.1. Proximity

The first of these criteria was proximity to the target market. Therefore we figured that the implantation of the site should be somewhere in California or Arizona.
Being closer to the target market not only greatly reduces the costs of power transportation, but also gives us a better chance to be known by our potential customers.

IV.2.2. Wind

The second criterion was wind power. According to the maps our study uncovered, Tehachapi Mountains suited our purpose perfectly. *Ref. Appendix 2: wind map*.
A deeper investigation revealed that Tehachapi Mountains have the best possible wind resources for power generation in the world. This is due to class 6 winds blowing through the pass during the whole year. It also appears that these winds are stronger and steadier during the spring and summer, which is when the power generated by the facility, would be most needed.
The same investigation also revealed that earlier projects declared the Tehachapi Mountains the best possible place for power generation. This has led 12 different companies to establish wind farms in the area. Though this may be a problem if it was planned to sell the power to local industries, it is also a great advantage when taking into consideration our third criterion.

IV.2.3. Infrastructure

The third criterion was infrastructures. The town of Tehachapi (*Ref. Appendix 3: General Maps)* is located close to highway 58. Therefore transportation of all equipment by road won t be a concern. An airport is also located nearby in case emergency dictates to send personnel or small equipment. (Refer to the maps for an overview of the transportation means available.)
Aside from the road infrastructure, Tehachapi Mountains are also a perfect spot due to the presence of other wind farms. Since these wind farms are connected to the power grid, it implies that the infrastructure is already present. This will make the cost to connect to the power grid almost insignificant.

IV.2.4. Environment

The fourth criterion was environmental concerns. As shown in the map *(Ref. Appendix 4: National Park Map)* there are no park or natural reserve nearby. The noise generated by the wind farm shouldn t be a concern either since the mountain area is not inhabited. From a more logical perspective, since previous wind farms didn t cause a problem to locals, ours shouldn t provide a nuisance in the same fashion. In any case, should any opposition arise in the region, the perspective of new employment our facility would create should flatten all opposition.

IV.3. PRODUCT RESPONSE

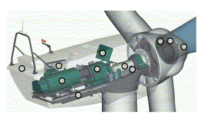
IV.3.1. Introduction

Considering the data that you gave us, and the characteristics of the site, our team has determined that the best solution in terms of Technical, Financial, Environmental, and Human Resources is to use the 900 kW Windmills.
We have decided that two Windmills would be proposed for this Joint Venture:

- The FWT-P-900 (which is a traditional 3 blades windmills).
- The FWT-J-900 (which is a top of the art 2 blades windmills).

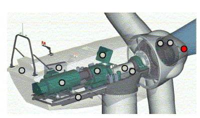
IV.3.2. Traditional windmills: The FWT-P-900

As a highly market-driven company, our products are designed to meet and exceed our customers' requirements. With a focus of quality, reliability, versatility, and cost effectiveness, our technology features variable speed control and the company's patented Dynamic VAR Control TM.



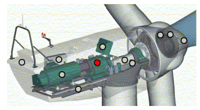
IV.3.2.1 Design

Underneath its sleek, aerodynamic design, the new P-900kW wind turbine is engineered for high, reliable performance, a low cost of energy, and ease of installation, even in the most challenging terrain.
Based on the proven P-1,5MW design, the P-900kW wind turbine is designed as a new generation of 3-bladed, horizontal axis, stall regulated wind turbine.



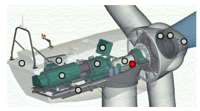
IV.3.2.2 Blades

The blades are conceived in our laboratories with airflow's technologies, to enhance turbine performance. Both turbine models use three rotor blades of epoxy and fiberglass composite. The surface is coated in a light gray color to prevent light reflections.



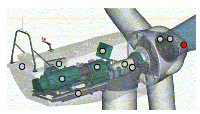
IV.3.2.3 Gearbox

The gearbox is a three-step planetary spur gear system, with the first stage as high torque planetary gear and the second and third stages as helical stages. The planetary stage is ideal for obtaining and transferring the rotor torque of the shaft, and at the same time a compact and robust design.



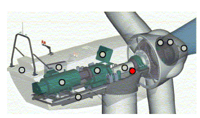
IV.3.2.4 Braking systems

The P-900kW wind turbine is provided with braking systems equipped with electromechanical pitch control for each blade.
During normal operation of the turbine each blade tip is maintained in operational position by a pressurized hydraulic cylinder located in the blade root. The release of the hydraulic pressure on the cylinders, intentionally or by a failure in the system, will cause the tips to deploy and the rotor to decrease the rotational speed.



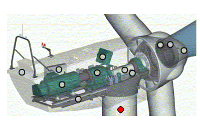
IV.3.2.5 Rotor

The P-900kW wind turbine can be delivered with three different rotor's diameters, which give different swept area. The hub is made in cast iron to give a stronger construction.
The P-900kW wind turbine is stall-regulated, which means that blades are fixed to the hub in a predetermined tip-angle.



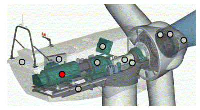
IV.3.2.6 Yaw system

The yaw system enables the wind turbine to be correctly positioned in the wind at all times, thereby resulting in the optimal power production and minimum stress on the turbine drive train.
The yawing of the turbine is done by planetary gears which are electromechanical driven with wind direction sensor and automatic cable unwind.



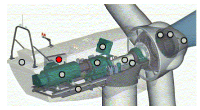
IV.3.2.7 Tower structure

Wind speed generally increases with height above the ground. Taller towers expose turbines to stronger winds, enabling them to produce more electricity.
The P-900kW wind turbine's tower design is a multi-coated, conicular tubular steel tower with safety ladder to the nacelle. The tower is also equipped with safety wire, working platforms and light fixtures. The climbing to the nacelle is from the inside of the tower. The tower heights range from 50 meters to 70 meters.
The corrosion protection and the painting are in accordance with ISO 12994 class 5.



IV.3.2.8 Generator type

The generator is a doubly-fed asynchronous machine and a rated power of P-900kW. The generator is optimized for the highest efficiency at 3/4 load, which under most wind conditions gives the optimum kWh production.
The joint coupling to the gearbox provides a robust and low-maintenance solution.
The inverter type is a IGBT-frequency inverter.



IV.3.2.9 Control system

The P-900kW wind turbine controller is constituted with a microprocessor-based programmable logic controller (PLC) and a remote control operating and monitoring system. All inputs from sensors and transducers are collected by the PLC. Thanks to the remote monitoring system, a full range of data can be read from a personal computer.
The P-900kW wind turbine operates fully automatically. It starts when the wind speed reaches 3m/s. The turbine produces electricity for supply to the grid, as long as the wind speed is between 3-25m/s. At wind speed higher than 25m/s, turbine will be shut down and lay down for safety reasons.
The turbine will automatically re-start after any shut down if no error is present. In this case, the error has to be analyzed and reset before the turbine starts up again.

IV.3.2.10 Lightning protection system

The risk that the turbine could be hit by lightning increases with the tower height. To minimize that risk, lightning receptors are installed on blade tips and discharge inside the rotor blades along the nacelle and tower.
If a lightning strikes the turbine blades or the nacelle, the lightning current will be lead to the earthling system with minimum risk of damage.
All electric and electronic components of the 900kW wind turbine are tested and can resist to a lightning.

IV.3.2.11 Sound proofing

The structure of the P-900kW wind turbine bears the noise insulation of the drive train.
The P-900kW wind turbine is equipped by sound reduced gearbox, reduced blade tip speed and noise reduced nacelle. The nacelle is lined with sound insulating foam and the generator and gearbox are supported by elastomeric elements to assure that they are among the quietest machines available in their class on the market today.

IV.3.2.12 Durability and strength

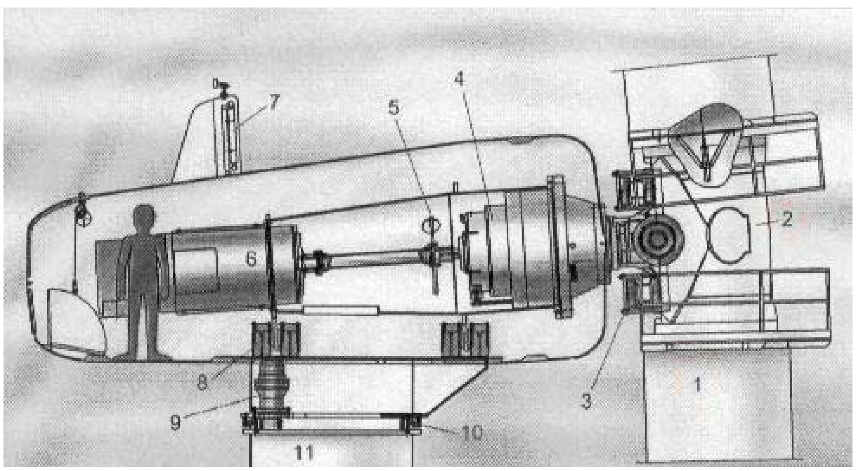
The P-900kW wind turbine is certified to IEC Class II for a 30-year life expectancy. The equipment is able to withstand storm exposure, rain, snow and hailstorm thanks to the robustness and the corrosion protection of the materials.
California is a risky area considering the frequency of earthquakes. That's why our materials are tested and designed to offer resistance to moderate earthquake (magnitude 5).

IV.3.2.13 Technical Specifications

Our P-900kW wind turbine exists with different rotors' length, from 52 meters to 57 meters. This last diameter allows a larger swept area and consequently a better efficiency.

IV.3.3. Innovative Windmills: FWT-J-900

This FWT-J-900 Windmill is the result of the best research in term of technologies and financial efficiency.
This windmill has the big advantage of being based on a 2-blades design. This design conduct to have a lighter and more economic wind turbine that has a better behavior during the variation of wind or hurricane.
The other main innovations of this wind turbine are the choice of stall controls to limit the power level at high wind speed, the integration of a new yaw system, which works without the expensive brakes, and the integration of the main shaft bearing in the gear box.
All these specifications mean a reduction of weight of 40% compared to other wind turbines of the same production capacity. This gain of weight minimizes the amount of construction material and the fatigue loads.
This new and innovative design has been certified in 25 countries. Of course California is one of these countries.



1. Blade
2. Hub
3. Teeter Bearing
4. Gearbox
5. Disc Brake
6. Generator
7. Cooler
8. Vibration Isolator
9. Yawing System
10. Yawing Bearing
11. Tower

IV.3.3.1 Blades

The blades have been specially design for this new generation of windmills. They are built of glass-fiber reinforced polyester. They are bolted to the hub via a number of steel fittings that are laminated into the blade root. The outer gel coat layer is colored gray with a dull finish, in order to avoid disturbing reflections.
The latest designed airfoils are also used, which improve the annual energy capture by 8 to 10%.

IV.3.3.2 Hub

The hub, which is cast of nodular iron, is a compact design, low weight and short over-hang from the main shaft bearings in the gearbox to the rotor center of gravity.
The teeter design of the hub reduces fatigue loads in the whole wind turbine.
Inside the hub there is a hydraulic unit that serves the blades tips. Power supply is provided by slip rings. The elliptical holes in the blade flange allow an adjustment of the angle of attack of the blades.
When needed for maintenance, the hub can be locked against rotation.

IV.3.3.3 Gearbox

The planetary gearbox increases the low rpm of the turbine to a value that is suitable for the generator. It also contains the main shaft bearing, which makes the wind turbine very compact. The gearbox is flanged to a tubular machinery bed. The lubrication is of splash type. Temperature sensors indicate need for oil cooling (by a heat exchanger couple to the liquid cooling circuit of the generator) and shutdown of the plant due to high oil temperature.

IV.3.3.4 Secondary Shaft and Brake Systems

The secondary shaft carries the brake disc and two flexible coupling.
Two brake systems are used on these wind turbines:

- The blade tips can rotate relative to the inner parts of the blades and thus brake the turbine when needed. During operation they are retracted by means of hydraulic cylinders in the hub. Braking is performed by the release of the hydraulic pressure, which make the tips move outwards and rotate at the same time.
- Two mechanical brake calipers utilize brake pads of a non-asbestos type. They are engaged by the force from springs when the hydraulic pressure is released. The control system supervises the wear of the brake pads and that the brake pads are completely unengaged at operation.

IV.3.3.5 Machinery Bed

The Machinery Bed is compact and easy to manufacture because of an innovative cylindrical shaped sections structure. The elastomeric elements (used for the connection between the Machinery Bed and the yaw bearing) act as Vibration Isolators, to avoid vibration from the gearbox and generator being transmitted to the tower, where they otherwise may generate noise. Access for personnel are provided through the yaw bearing and a hole in the bed.

IV.3.3.6 Nacelle

The Nacelle provides a shelter for maintenance personnel, with full standing height.
The nacelle is made of glass-fiber, reinforced polyester in a top and bottom half, which are bolted together. The floor is covered with an anti-slip material.
There is a hoist on the top of the machinery bed that can be used to deliver equipment through a hatch in the aft end of the nacelle or through the tower. It can also be used, for example, when lowering a blade tip to the ground. The hatch serves as well as the emergency exit when using the evacuation equipment, in case of fire in the tower.
On the top of the nacelle there is a heat exchanger, which dissipates excess heat from both the gearbox, and the generator. There is also other sensors to determine the velocity and the direction of the wind. These equipment can be reached from a hatch in the roof.

IV.3.3.7 Yaw System

The three yaw drive planetary gearboxes are driven by hydraulic motors and act on the inner cogged ring of the yaw bearing.
During all operation the yaw system enables the nacelle to perform small, damped rocking movements. Only when needed for maintenance, the yaw system is locked against movement.

IV.3.3.8 Electrical System

The electrical system consists of a one-speed induction generator with adjustable slip, made with interior, variable resistors coupled to the rotor windings. This admits a variable slip in the range of 1 to 5%. The generator is liquid cooled.
The power is transferred from the generator to the bottom of the tower by flexible cables that allow two turns of twist in either direction.
We also working on the integration of a new variable speed generator which has just been successfully tested by NWTC and CRNS.

IV.3.3.9 Tower

The conical-cylindrical tower is welded of steel plates. Access is by means of a door on ground level. There is a vertical ladder inside the tower, equipped with falling protection. The tower is sand blasted and painted with a rust protection color in the same shade as the blades.

IV.3.3.10 Control System

The controller is based on a microprocessor. It manages the complete operation of the wind turbine, supervises the systems when stationary or idling at low wind speeds, cuts in the generator at nominal rpm, commands the wind turbine to follow the wind direction, "unwinds" the power cables when needed (by rotating the nacelle at stand-still), supervises all functions and stops the turbine when the wind becomes too strong or an emergency occurs.
Access to the control system can be provided via the telephone network, by using a PC with a modem.
If the braking power of the generator disappears the turbine may quickly accelerate to high rpm. The control system can handle such situation in a safe way and is capable of braking the turbine, with duplicated functions for indication and braking.
Through a "watch Dog" function, a loss of the computer function activates an emergency stop. It is performed by breaking the power connection to the valves that keep the hydraulic pressure in the blades tip cylinders and in the mechanical brake. Activation of the blade tips is by centrifugal force whereas the mechanical brake callipers are activated by mechanical springs.
Either the two blade tips or one blade tip and the mechanical brake is enough to brake the turbine to a safe and low rpm.

IV.3.3.11 IT Solutions

Besides the control system, it is also possible to connect an industrial PC in the tower base for measurements and maintenance purposes. This PC stores measurement data continuously, which enables a very good follow up of the operation. If a fault would occur, an SMS text message can be sent to a mobile telephone. Reports can also be e-mailed automatically. The latest versions of maintenance manuals are stored on the PC, which it is possible to connect to also by modem

IV.3.3.12 Sound Proofing

The elastomeric elements are used to avoid that vibration from the gearbox and generator are transmitted to the tower, where they otherwise may generate noise.
Inside the Nacelle, we also use sound absorbing material on the wall and the roof.

IV.3.3.13 Lightning Protection System

The J-900 have the same lightning protection than the P-900.
I.e.: Lightning receptors are installed on blade tips & on the nacelle, and discharge inside the rotor blades along the nacelle and tower. If lightning strikes the turbine blades or the nacelle, the lightning current will be lead to the earthling system with minimum risk of damage.

IV.3.3.14 Technical Data

C.f. Appendix 6.

IV.3.4. Quality

Our company is certified by the respected Certification Company "Veritas" in accordance with the ISO 9001 and ISO 14000-quality assurance standard.
Only by ensuring a high, uniform quality at all levels it is possible to exploit technological advances to the full.
The highest emphasis has been placed on stringent quality control procedures and demanding approvals in all areas form development and construction to production, sales and service.

IV.3.5. Maintenance

The backbone of the FWT service is Intelligent Plant Monitoring". All the vital parameters, aggregates and operating states of any wind turbine in the field are permanently computed, stored and their performance and status electronically tested by their operating system. The data compiled can be viewed by our service and by the regional partners via remote date transmission or via the Internet. The data inquiry can be carried out form any other location or mobile phone, provided there is a telephone connection Internet connection.
FWT service is comprehensive, prompt and customer-friendly.
Our service comprises the following:

IV.3.5.1 Area-comprehensive Monitoring

FWT control and monitor your turbines comprehensively, for 24 hours a day, 7 days a week.

IV.3.5.2 Detailed information

FWT notifies you at any time and promptly on the status of your installation. You are kept informed at all times on the availability and the maintenance status of your wind turbine.

IV.3.5.3 Failure corrective Action

Should any malfunction occur leading to a stoppage of the wind energy converter, you will be notified without delay.
FWT furthermore informs you regarding the type of fault, the corrective action and the date when the wind energy converter is expected to return to the grid.

IV.3.5.4 Regular Maintenance

FWT maintains your wind turbine at regular intervals, i. e. every six months.
Maintenance is carried out using detailed maintenance checklists. Through our maintenance report you get detailed information on the maintenance works carried out.

IV.3.5.5 Service Stand-by

The service control center of FWT is on permanent stand-by, day and night. Faults are analyzed without delay. Necessary action will be initiated in accordance with a step-by-step procedure. Should a team be required locally, it will attend to your installation within the shortest possible time. You are immediately notified about the fault ant the corrective action required. In addition, you are kept informed of the sequence and dates of the maintenance works. A detailed report is issued on conclusion.

IV.3.5.6 Operator training

FWT wind energy converters are high tech installations. If you do not have the necessary qualifications to maintain your wind turbines, we can train you. Your are the most important guarantee for the trouble-free operation of your installation.
FWT will train you and your employees.
FWT offers intensive operator training, enabling you to get to know your wind energy converter down to the last technical detail.
This helps you assess your wind energy more effectively and precisely.

IV.3.6. Human Resources

IV.3.6.1 Staff Training

Local qualified operators and technicians are necessary to operate and maintain the facility. 2 operators and 4 technicians should be sufficient to maintain a wind farm of 34 turbines. In order to achieve staff operational competency our society proposes high level training courses. Courses will be performed by 2 instructors, an American Physical Engineer (Department of Aeronautical and Astronautical Engineering, University of Illinois) and a French Doctor in Energy Wind Resources (Laboratory of Energy and Materials, Paul Sabatier University, Toulouse). The training will take place in Tehachapi and will include both theoretical and practical aspects of all skills necessary for the wind farm maintenance. A final examination will be performed to choose the best trainees and future employees.

V. ENVIRONMENTAL ISSUES

V.1. WEATHER AND CLIMATOLOGY

The Tehachapi Mountains (elevations ranging from 2500 to 8500 feet) which are the southern extension of the southern Sierras form a transverse range that runs east/west. They are subject to five wind flows: Polar, Pacific, Subtropical, Continental and Gulf. The average wind power in Tehachapi Mountains is between 600-800 W/m2 (class 6).
Reports from the NWS Measurement Center indicate that the average annual rainfall in Tehachapi is 10.94’’ with temperatures ranging from 40 to 73¡F.

V.2. EARTHQUAKES

Some earthquakes took place in the area of Tehachapi because of the presence of various faults. For example Kern County earthquake (1952), magnitude M_W7.5, and Bakersfield earthquake (1952), magnitude M_L5.8. Our wind turbines and installations are conceived to resist to an earthquake of magnitude 7.5 to 8.

V.3. AESTHETICS AND VISUAL IMPACTS

The design of the turbines is conceived for an optimal integration in the landscape. A visual impact analysis will be made with a simulation program. The high-voltage power lines will be buried.

V.4. NOISE

For a few years we have considerably reduced the amount of noise produced by our machines to avoid disturbing potential human or animal residents of areas surrounding the wind farms.

V.5. BIRDS AND WIND PLANTS

The California Energy Commission is currently planning detailed studies at wind sites in the Tehachapi pass. Previous results have reported that a bird will collide with a given wind machine no more than approximately once every 8 to 15 years. Birds like raptors more often collide with numerous other obstacles like vehicles, tall structures or plate glass that cause the majority of bird deaths, showing that wind turbines are not likely to affect birds in an important way. Moreover, we construct only tubular towers instead of lattice towers to avoid the perching and killing of birds.

VI. FINANCIAL RESPONSE

VI.1. TERMS OF AGREEMENT

It has been established that FWT brings 40% of the capital.
A large part of it comes from FWTs own money.

As for equity, FWT brings 60% of the ownership.

Somehow, the human resources selection does not follow the financial repartition. Indeed, in order to have the best efficiency on this JV, FWT suggests a homogeneous board of executives:

- 1 EDPC senior executive
- 1 FWT senior executive (the two would work constantly together)
- 1 EPDC technical expert
- 1 FWT technical expert
- 1 EPDC engineer
- 1 FWT engineer
- 1 JV production manager
- 1 FWT general supervisor
- Maintenance personnel would be local and trained by FWT.

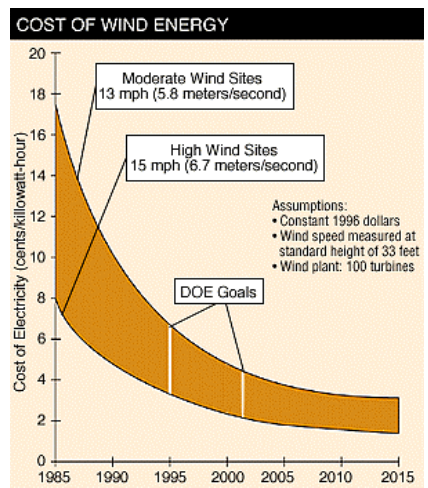
VI.2. THE EXACT DESCRIPTION OF OUR PRODUCT

Considering all the requirements of the JV, we will finally propose:

- a precise marketing study upon the implementation of a 30 MW Wind farm, which will be located on Tehachapi Mountains, CA.
- The 30 MW wind farm is obtained by 34 900 KW towers.
- the construction, finding and transport of all materials concerning this Wind farm. All the spare parts that need to be assembled are taken in charge by FWT. The JV should finance this part respecting the percentages mentioned before.
- A maintenance contract is being proposed by FWT to EPDC.
- FWT promises to train and hire local workforce, except for the jobs that concern FWTs personnel.
- Benefits will be dispatched respecting the proportion of capital that FWT or EPDC brings in.

VI.3. FINANCIAL PART

The choice of our customers has not yet been decided.
As for the resale of electricity, the average sales price is 4.3 cents per KW/h.
Selling to the consumer will offer much more profits, for the average selling price is 6.7 cents per KW/h. Somehow, the only condition for having much more profits than the resale industry is that the connection to the grid should be looked after by an external supplier.
Therefore, the aim of this JV is to make a maximum of profits.
That is why we have proposed a new model of turbine in one of our projects: the reduction of costs permitted by this two-bladed model allows us to have more profits much more quickly.



The cost analysis gives us a clearer view of the situation of the difference between the two projects :

As for the **feasibility study**, all the figures will remain the same for the choice of the exact site will remain the same. Therefore, each cost (estimation of wind potential, environmental, etc) is exactly the same.

The **engineering** would also be identical from one project to the other. Indeed, everything that concerns mechanical and electrical conception does not change from one project to the other. The two-bladed turbine technology has been studied for a long time by our engineers, so that this technology is now fully integrated in our research and production process.

The main change consists in the energetic equipment. Indeed, the two-bladed system and the three-bladed systems have not the same costs.
The Wind power tower in itself is cheaper with two blades than with three. The two-bladed model costs USD800 000 whereas the three-bladed USD900 000.
Anybody would trust that a two-bladed model would cost two thirds of the price for three blades, but in fact it is not the case at all. The reason for a smaller difference between the two

Components	% in value
Blades	14 %
Hub	3 %
Gears	14 %
Generator	8 %
Transmission	4 %
Hydraulic system	8 %
Electricity	9 %
Nacelle	8 %
Construction	3 %
Other equipments	5 %
Tower	24 %
Total	**100 %**

As we can see on this table, the blades only represent 14 % of the final cost.
This explains the reduction of only 100000 $ between the two models, which makes overall a USD2 million economy.

Consequently, transport of blades would by reduced by one third, for we have less blades to bring of the site of construction. Indeed, considering that we will have to transport the blades in difficult landscape configuration, the two-bladed model permits a reduction of 2/3 of transport costs.
Spare parts as well would be reduced.

As for the allied infrastructures, they only correspond to the number of towers, which does not change from one project to the other. Therefore, the costs of allied infrastructures does not change on each project.

Concerning the other costs, the interest rates follow the average rates of national banks. The unexpected costs budget follow a security rate of 5 %, which is the average amount that is provided in such projects.
The training of personnel is supposed to be short: indeed, US personnel is as qualified as French technicians; therefore, they will follow the same kind of course, which lasts 10 days approximately.
Above all these costs comes the different incentives for wind farm projects. It appears that **only 2 implemented incentives** are proposed in the US, which are the following:

- Investment tax credit
  The federal policy was in effect from 1978-1985. There were two components: (1) 10% investment tax credit of the value of the installed wind energy equipment, (2) 15% energy investment tax credit. In California, there was also a 25% investment tax credit on the value of the installed equipment. California's ITC was in effect from 1978-1987.
- Production tax credits/direct cash payments
  US$0.015/KW produced can be subtracted from income taxes. For non-taxpaying entities such as municipalities a direct cash payment of US$0.015/KW is paid.

Therefore, we can consider that only the second incentive is still effective.

The first project, the two-bladed turbine, is financed by a USD35m loan. The second project is financed by a USD40m loan.

Ref. Appendix 7 & 8.