

## **Executive Summary**

CelTek Inc. is a start-up energy source research and development company with a strategy for overcoming the commercial barriers to wider use of fuel cell technology. The initial focus is on developing a power source for the third generation (3G) mobile phones. Based in Melbourne, Australia, CelTek is resolved to establish itself as a player in both domestic and overseas markets through the formation of strategic alliances with globally established mobile phone manufacturers, especially those developing 3G mobile phones. CelTek's aim is to enter a rapidly growing market that is fervently demanding cutting-edge technology and is currently seeking to achieve an adequate power supply for the 3G mobile phones. In order to satisfy this demand CelTek products are not only going to be designed to integrate readily with existing mobile phone technology to give substantially longer battery life, but more importantly, make possible the next evolution of the mobile phone, the third generation 3G mobile. Current Li-batteries give adequate talk-time, but are incapable of supporting the new features such as full colour video streaming and Internet access, for periods of more than half an hour at a time. CelTek is being established under the umbrella of the CRC for micro technology, an organization with powerful business connections and a track record in establishing successful new businesses to take new discoveries to the market place. The CRC will play several roles during the start-up phase from providing administrative assistance to negotiations with prospective industry partners. It is planned that the CRC will hold a 20% interest in CelTek, as do the founders. The Intellectual Property resides with the CRC who have guaranteed exclusive lease-back for five years. This offer is aimed at venture capital, as we require around 3 million dollars for stage two, and is for the remaining 60% of the company as it stands today. The expected return on investment is 100% in three years, with the first exit opportunity at the end of stage two when the industry partner(s) will put forward the capital for expansion into full-scale production. It is our recommendation that you convert your share of the company at this point and take advantage of the opportunity afforded to stick with CelTek for a potential return of 300% following the first years of full-scale production. CelTek sees its strengths as excellent technical expertise and the founders have exhibited the capability and drive to convert concepts to the engineering stage in previous projects. We hope you will find that this offer document makes a compelling case for investment in CelTek.

## 1 Overview

### 1.1 Enterprise

CelTek Inc. has been developing technologies for micro fuel cells since the beginning of 2002. The company was originated from a PhD research project and was formed with the objective of developing a micro fuel cells for small devices. CelTek seeks to become a major participant in the mobile power supply industry, targeting the industry sector. The company has reached the proof of concept stage and has established a strong relationship with CRC for micro technology to develop this technology in Australia, for sale around the world. We are developing plans for our first micro fuel cell prototype, called the CT2002. CelTek will draw on the resources of the CRC for micro technology to manufacture the product. Our current facilities, located at 535 Burwood Road, Hawthorn, VIC, are expected to be adequate for the first stage of production. Additional manufacturing personnel will be required to expand the operation at the second stage. Most of the new personnel will be required for the assembly operations. Functions such as accounting and finance will be outsourced or filled by experts prior to the expansion phase of the business.

### 1.2 Personnel

#### Management Team

**Hengyi Jin** – Personnel Manager and Coordinator

BSc(Hons), Materials Science, MSc,  
Electrochemistry, Northeast University, China  
PhD, Institute of Corrosion & Protection, Chinese  
Academy of Science, 1994 - 1997  
PhD, Laser – LIGA for the fabrication of  
microactuators, IRIS, 2000 – 2002  
Certificate in Project Management, CRC for micro Technology, 2001



Hengyi Jin graduated with a bachelor degree with Honours in materials science, followed with a master degree in electrochemistry from Northeast University, China. Then, he started his research career in the Institute of Corrosion and Protection, Chinese Academy of Science in 1987. He worked there for ten years before coming to Australia in 1997. Hengyi Jin has been involved in many projects as research engineer, group leader, and project coordinator. He has the expertise in surface technology, electrochemical engineering, materials science, and laser processing. His contributions included TiN & Ti(Y)N coatings on cutting tools and dies for Chinese No.1 Auto Corporation, erosion & corrosion mitigation technologies for chemical and petrochemical industry, and laser processing (during his PhD study) for a variety of engines, such as petrol engine, industrial turbine, and jet engines. His experience is directly applicable to the project. After arriving in Australia Hengyi was employed at Monash University to work with Prof Brian Cherry and Dr Maria Forsyth for several

small contract projects with Queensland Alumina Ltd. In March 2000, he started his PhD study at IRIS under the supervision of A/Prof Erol Harvey and in association with the CRC for micro technology. Since he joined IRIS, he has published five research papers.

**Hengzi Wang** – Research & Development

BSc(Hons), Power machinery, Shanghai Jiaotong University, 1990  
PhD, Microfluidics, IRIS, 2000 - 2002



Hengzi Wang is one of CelTek Inc's key founders. He was educated at Swinburne University, receiving PhD degree in micro-system technology. He got his Bachelor of science degree, major in energy conversion in 1990. And since then, he has been working in the field of energy conversion. His inspiration to combine micro-fabrication with fuel cell technologies to create small size and high specific energy fuel cells was the initial motivation to form CelTek Inc. Hengzi will head the research section of CelTek and will administrate the initial small scale production run, overseeing and training two technicians to be hired at the start of production.

**Derek Teichmann** – Sales and Marketing

BEng(Hons), Materials Engineering, University of Wollongong, 2001  
MEng, Industrial management, IRIS



Derek has graduated with a Degree in Materials Engineering with Honours from the University of Wollongong in 2001. He spent the next year working in industry with two giants in the pipe manufacturing industry One Steel and Bredero Shaw International Pipe Protection where he learned about the added difficulties of scale on large projects such as the Trans Tasman Gas Pipeline. Working in QC/QA roles he learnt about many aspects of production, occupational health and safety and workplace relations. After being offered a Scholarship to attain a Masters Degree in Engineering he joined CelTek Industries, a new company spun off from the CRC for micro technology, with the objective of developing the power cell of the future in cooperation with an industry partner. Derek has joined the company in the capacity of marketing manager and brings to the job his drive and enthusiasm for a challenge. He views bringing about the successful outcome of this venture as an essential next step in developing himself as a successful manager of even bigger projects. His performance during the proof of concept phase of this project has been excellent and has served to demonstrate his capabilities. We feel that he is highly committed to this project and will play a key role in the CelTek team in the future.

**Guangyu Liu** – Finance Manager

BEng(Hons), Mechanical engineering, Jilin University, China, 1996  
MEng, Mechatronics, Wuhan University of Science and Technology, China, 1999  
PhD, Diagnostics on computer controlled complex machine, IRIS



Guangyu Liu was granted an International Postgraduate Research Scholarship (IPRS) from Australian government. He started his PhD degree study in IRIS. His current project is Diagnostic technology and Monitoring of Laser machining. This is a multidiscipline research program on condition monitoring of Excimer laser micro machining at CRC  $\mu$ Tech lab in IRIS, Swinburne University of Technology, which includes such fields as laser micro machining, analog & digital signal processing, artificial intelligence and controlling of CNC machine. As a R&D engineer, he previously worked at Dongfeng Motor Co., one of the top three motor giants in China from 1997 to 2001, focusing on R&D of net forming, CAD/CAM of Die and injection mould. Many of his developments had been applied in this company and due to their scientific and technical innovation, two of them won awards for him from this company. He had gained 5 years experience on precision forging and injection moulding ranging from factory floor operator through to supervisor and finance management in the Mechatronic department, Dongfeng Motor Co., China. He brings with him invaluable manufacturing experience and his drive has been demonstrated in his rapid mastery of the financial aspects of this project.

**Benny Hendarto** – Operational Manager

BEng (Hons), Mechatronics, The University of Melbourne, 2001  
BCS, The University of Melbourne, 2001



Benny has graduated with a degree in Mechatronics Engineering with Honours and a degree in Computer Science from The University of Melbourne in 2001. In the last 2 years he has started and run a trading company exporting Zinc and waste metals.

Benny is currently also conducting postgraduate research on wood sanding. While he is doing his postgraduate study, he joined CelTek Industries, a new company founded within the CRC for micro technology, with the objective of developing the micro fuel cell, the future of portable power. Relevant to this business analyst role, Benny has 3 years commercial experience in developing Business Analyst software packages and 2 years experience in managing a trading company. Benny also brings with him valuable contacts with people in the communication and IT industries.

### **1.3 The Offering**

CelTek Inc's component products include a series of fuel cells for use in everyday items. The high specific energy density of our direct methanol fuel cells (DMFC) as well as the small size is crucial in the application of 3G mobile phones and other potential portable devices. The CRC for micro technology holds a patent on the design of the CT2002 and a number of trade secrets are held on the process of manufacturing the CT2002 components. The patents are leased back from the CRC for micro technology at a rate of 2.5% of the retail value of the fuel cells produced. In brief the venture capital contribution required for stage two is 3 million dollars. The first exit point is expected to be between two and three years from the beginning of this financial year. The return is going to be approximately 100% of the initial investment after two to three years and up to 300% over five years.

CelTek seeks to be among the first to the market with a fully operational product, the CT2002, however, neither the marketing strategy nor the financial outcome depend on being first. If we must follow another group to market then we will take advantage of our competitor's expenditure on the required public education campaign, required when introducing such a revolutionary new type of power source, to lower the sale price of our product. The bulk of sales (an expected 85%) will be to the industry partner for installation into their mobile phones. The differences between our fuel cells and the potential competition is that the CT2002's are much smaller and cheaper than other designs put forward or patented currently and the fuel mix utilised has the lowest methanol penetration problem of all the designs currently patented. The CT2002 is quite unique in the industry and we expect no difficulty in obtaining the initial expected release price of \$60 per unit, wholesale, with an expected average selling price of \$53 per unit in the first six months. After converting to mass production, the onset of which will depend on the activities of our competition, we predict an average selling price will fall to \$35 per unit wholesale to manufacturers. In subsequent years we anticipate further drops in sale price and an almost equal drop in manufacturing cost as volume of production goes up. CelTek plans to diversify the product range to offset any downturn in productivity resulting from increased competition and growth in payroll commitments. Expected sales volume will more than cover the quantity required to be viable and demand will outstrip supply for the first and probably the second years of production. It is anticipated that the margin on sales to the industry partner will be small, however the advantages of advance payment and large volume of sales as well as guaranteed orders will offset the disadvantages of this scenario.

### **1.4 Marketing Strategy**

Our first marketable micro fuel cell series, the CT2002, will be introduced early next year. The initial marketing thrust will be aimed at increasing the useful operating time and functionality of the new 3G mobile phones. It is expected that the market will take a short time to accept the new technology and that the high initial price will limit sales to the elite end of the market. For this reason we are starting with small scale production runs. With the success of the first stage, we will gain the needed industry reputation for the CT2002 and complete the first stage of market acclimatisation to

micro fuel cells. The second stage, mass production, will then begin when the customers are more familiar with micro fuel cells. Due to the likely arrangements between CelTek and the potential industry partner the majority of our production of micro fuel cells will be sold directly to our industry partner. In the meantime, CelTek will develop further applications for micro fuel cells and possibly work with other manufacturers after five years, to expand the business. By following this approach we create a firm foundation for CelTek in the short term while allowing for large returns in the future.

For this venture a variety of sales scenarios present themselves. The most likely, which we are working toward currently, is a close association with a large telecommunications/mobile manufacturer, other possibilities include military or biomedical manufacturers. Another option is a further round of investment and manufacturing and marketing the power supplies independently to any customers who are unable to secure supplies from their competitors or find the price too high. This course of action would require an increased investment and a change in marketing strategy, however it would also offer an increased return. We expect that marketing and sales will be conducted directly through CelTek and that costs will be as low as \$200,000 per annum for the likely scenario.

### 1.5 Milestones

There are some preliminary dates and expenditures for the main milestones of the CelTek offer provide in the table following.

| Milestone                                       | Start      | End        | Est. Cost    |
|---|------------|------------|--------------|
| Form the CelTek                                 | 01/01/2002 | 15/02/2002 | \$20,000     |
| Proof of concept                                | 01/01/2002 | 05/08/2002 | \$20,000     |
| Partnership with CRC                            | 01/06/2002 | 20/06/2002 | \$1,000      |
| Working prototype                               |            | 01/11/2002 | \$500,000    |
| CRC, CelTek, and industry partner               | 01/10/2002 | 01/04/2003 | \$200,000    |
| Sub-contract for initial production             | 01/02/2003 | 31/12/2003 | \$975,000    |
| Setup plant                                     | 01/05/2003 | 30/06/2004 | \$4,000,000  |
| First financial year, bulk production           | 01/07/2004 | 30/06/2005 | \$12,500,000 |
| 2 <sup>nd</sup> financial year, bulk production | 01/07/2005 | 01/01/2006 | \$17,000,000 |
| New products innovation                         | 01/11/2004 | 01/11/2006 | \$2,000,000  |
| Bulk production plus new product                | 01/07/2005 | 01/07/2007 | \$28,000,000 |
|   |            |            |              |
| Totals  | 01/01/2002 | 01/01/2006 | \$65,216,000 |

## 1.6 Projections

We expect our first micro fuel cell working prototype can be developed by the latter half of the second year. Small scale production will proceed subsequently and this will serve several purposes apart from starting sales. Key benefits of this early production is to demonstrate functionality to potential industry partners and allow for more extensive field trials. After that, and in cooperation with the CRC for micro technology and the industrial partner, we will set up the production facilities for large scale production of the CT2002 series micro fuel cells in the third year. The industry partner is expected to install the CT2002 supply in its own mobile phones and the sales are expected to be over 1 million units by the fourth year. In subsequent years the sales volume will double and increase in line with increased production capacity installed in subsequent years. We are planning to sell the CT2002 at a higher margin in the first year, and then after 2 years of high volume production, we assume the cost of manufacturing will drop and that the selling prices will also fall. Around this time we anticipate stronger competition and that is a further reason for lowering sale price expectations. CelTek should be well positioned for long term growth and profitability. To achieve this goal we will require an immediate capital investment of around one million dollars in the first year to develop the working prototype. A further two million to start production will be required in the second year. At the end of the third year, CelTek Inc. plans to repurchase the investment and return 100% over that period or the investor may choose to convert their investment with the expectation of much higher returns later in the fifth year of the planning period.

## **2 The Enterprise**

### **2.1 Objectives**

CelTek Inc expects to become a developer of innovative and high quality portable fuel cell products in the future. To this end we are building a strong foundation of technical expertise and industry relationships through investment in our first venture, the CT2002 micro fuel cell for mobile applications. To start this enterprise the founders of CelTek invested six months of unpaid labour and 10,000 dollars each to determine the feasibility of an innovation in the field of fuel cell research and get to the proof of concept stage. Next we presented our findings to the CRC for micro technology and sought their support for the creation of a spin-off company to take the concept to the prototype stage and begin small scale production. This step was essential because the ownership of the intellectual property rights rests with them. The next thing CelTek must accomplish is to obtain \$3 million in venture capital for this enterprise. We plan to introduce micro fuel cell CT2002 series in the second year of operation. Then we build manufacturing facilities with the assistance of an industry partner in the third year of the enterprise. Negotiations for this partnership are expected to take around six months and cost several hundred thousand dollars to finalise. After initial production begins and the concept is proven we plan to equip for large scale production and expand the company with the help of an industry partner. After five years the company should be established as a player in the fuel cell market and be generating at least \$25 million in annual sales revenue.

### **2.2 History**

CelTek Inc was founded in early 2002 by a group of PhD's with a good idea and a common belief in the potential of micro fuel cells: Hengzi Wang, Derek Teichmann, Guangyu Liu, Benny Hendarto and Hengyi Jin. No outside capital has been used to fund the operations of the enterprise. The enterprise was founded based on the industry need for power source that could provide long lasting power for the new third generation mobile technology.

### **2.3 Organization**

CelTek Inc has 5 personnel and plans to add a further two this year, all of whom will be involved in the research and development process. We currently lease our office and fabrication space which is adequate in this early stage of development.

The organization structure is discussed in the management section and is traditional and not top heavy. It includes future positions to be added during the second stage after we obtain investment capital. Because of the origin of the company, we have been able to keep the operation small and the overhead low. CelTek has been selective about the personnel hired, and we have a high level of expertise. There will be a large

increase in personnel numbers with the advent of production. A rough indication of numbers is shown in table 2.3.1.

Table 2.3.1 Personnel Count

|                          | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------------|------|------|------|------|------|
| General & Administrative |      |      |      |      |      |
| Management               | 2    | 3    | 3    | 5    | 5    |
| Non-management           |      | 1    | 1    | 2    | 2    |
| Production               |      |      |      |      |      |
| Management               | 2    | 2    | 4    | 4    | 4    |
| Non-management           | 2    | 10   | 16   | 21   | 26   |
| Marketing/ Sales         |      |      |      |      |      |
| Management               | 1    | 1    | 1    | 2    | 2    |
|                          |      |      |      |      |      |
| Total Personnel          | 7    | 17   | 25   | 34   | 39   |

## 2.4 Operations

CelTek Inc currently leases a 200 square meters that is a combination of office and laboratory space. The majority of the office furniture was purchased "second-hand" and has minimal value. Major fabrication equipment are leased from CRC for micro technology and Swinburne University, including Excimer laser NC machine, AVIA laser cutting machine, hot embossing machine, and micro milling machine. As we enter into the development stage of micro fuel cell series, CT2002, we will add micro injection molding machine with class 100 clean environment. While majority of the parts are out-sourced from sub-contractors, the core assembly and micro channel machining are conducted at CelTek. The process of hybrid microinjection molding the components is accomplished with technology proprietary to CelTek Inc. The production is based on orders, with just-in-time delivered components from an outside agency, and then packaged in CelTek and shipped to the customer from our delivering centre.

## 2.5 Future

Our organization structure and facilities will be adequate for this year. Next year we anticipate a capital expenditure to acquire new facilities adequate to support our growth over the next several years. We also expect to engage an executive officer during the second phase of operations to formalise the management structure and establish the image of CelTek in the industrial landscape.

## 2.6 Summary

CelTek Inc is a young enterprise, located at 535 Burwood Road, Hawthorn, VIC. We have formalised an agreement with the CRC for micro technology for support and development of our new concept of micro fuel cells. We are legally structured as a corporation with 4% of the common stock being owned each of the company founders, 20% by CRC for micro technology and 60% will be made available to obtain the capital required. Products will include a limited line of micro fuel cells, however plans for a wider range of products are considered for other sections of the market in the later stages of the plan. CelTek Inc's manufacturing facilities are in a favourable location to meet current and projected business requirements and the community is pleased with the impact of the facility on their environment. The manufacturing organization is composed of personnel with good to excellent skills. Our ability to control the product development process is proven as is our reputation for output of research and development. Because of our small size, CelTek Inc is too small at this stage to compete with the larger players, especially with a new product, so we intend to form a partnership with a major player in the telecommunications sector, who will provide a market, have an interest in defending our IP and will provide investment to build larger fabrication facilities at the end of the second stage of the plan. Our basis for competitiveness is our smaller size and higher performance. Our small size and strong technical expertise allow us freedom at this stage to act relatively independently. The enterprise has a strong commitment to the marketplace and we are confident we have the ability to maintain growth in our components business and develop and market CT2002 as a highly differentiated product.

### **3 Products**

CelTek Inc's products will consist of a series of micro fuel cells for use in everyday items. The high specific energy of the proposed fuel cells as well as their small size will be useful in the application of 3G mobile phones and other potential portable devices. The patents relating to the design of CT2002 are held by the CRC for micro technology. Applicable trade secrets are also held on the manufacturing process of the CT2002 components. The patents are leased-back exclusively in a five year arrangement between the CRC and CelTek.

CelTek Inc's product, CT2002, may not be the first product of its kind on the market. If another group beat us to market we regard that as no disadvantage as there will be a high cost associated in educating the public on the usage of this new power source. Alternatively, we can try to cooperate with an industry giant to make the fuel cell, by showing the competitive advantages of fuel cells. The competitive advantage of our fuel cells is going to be that they are much smaller and cheaper than others. The CT2002 is quite unique in the industry.

#### **3.1 Description**

CelTek Inc intends to offer high power capacity and small sized micro fuel cells at the first stage of its development. In the future it may also develop other portable fuel cells for the military and medical applications. The CT2002 design applies direct methanol fuel cell technology, and is fabricated using micro-technology. The power capacity for the CT2002 series are 3-5 Watts, targeting the third generation mobile phone application, and guaranteed 5 hours full usage time for a 3<sup>rd</sup> Gen. mobile, and 100 hours talk time for the current mobile phones. We plan to target the portable devices that can not be developed at this moment due to high power requirements, and we foresee that the micro fuel cell can solve these power supply problems, and this will make the commercialisation of such devices possible.

Our product, the CT2002 series, is packaged in two main formats. The micro-fuel-cell can be made self contained, similar to the current Lithium-ion batteries for mobile phones. Or it can be integrated into the portable devices, such as 3<sup>rd</sup> Generation mobile phones. The first fabrication strategy targets the current mobile phone market, the design intends to be compatible with Lithium-ion batteries and the customers will not need to change their mobile phones to be able to use our fuel cell power units. As traditional mobile phones will still last for several years, this strategy ensures we do not lose this section of the market. The second fabrication strategy will target the new 3G portable devices. In this case, we plan to make the fuel cell an internal component of the phone, and sell it directly to the device manufacturers for installation into their phones. In both strategies the product we supply our customers, we will make it convenient to refuel the micro-fuel cell. An accessory fuel container will be designed by CelTek, and manufacture sub-contracted out for sale to the market. The fuel will be 40% of methanol diluted in the water. This concentration is designed to give sufficient energy, cooling and is safe for use in the public domain. It is expected that, due to the very low fire risk of this mixture, it will be deemed safe for sale and transport around the world, including on airplanes.

### 3.2 Market Status

We have reached the proof of concept stage with our proposed micro fuel cell, the CT2002 is a new product in the final stages of development. We are now working on the procedures for standardising the design and procedures for fabrication. And final refinements of the billing of materials (BOM) are underway. The size of the market is virtually unlimited with continuing strong growth of around 50% a year and total sales of around 400 million units in 2001.

### 3.3 Value

Our CT2002 product line is of most value to manufacturers of "3G" mobile phone products, which are still lacking a compact long life power source. Lithium-ion batteries don't have sufficient capacity for 3<sup>rd</sup> Gen. Mobiles when used for streaming video and Internet. With the micro fuel cell 3G mobile phone users can enjoy conversation as long as they like and the refilling of methanol to the micro-fuel cell can be done within seconds, which would of course translate to greater customer satisfaction.

Our analysis has shown that there is trend for smaller portable devices to be used as video telephones and portable computers for Internet surfing and daily organisers. The development is booming for these devices, and the appearance on the market of our fuel cells could be the power supply solution for them.

### 3.4 Cost to Produce

Cost of production is reduced by fabricating on the micro scale. The high cost of materials is one of the main reasons why fuel cells are not in wider usage today. Materials consumption is minimised when the scale is reduced due to an increase in surface area. The cost predictions below are corroborated by other groups involved in fuel cell research.

|                                 |        |
|---------------------------------|--------|
| TOTAL MATERIAL COSTS            | \$5.00 |
| License fee per unit            | \$1.00 |
| Estimated labour costs per unit | \$3.00 |
| <br>                            |        |
| TOTAL COST TO MANUFACTURE       | \$9.00 |

As our purchase volume increases, purchase price for the materials will decrease by up to 20%.

As we gain experience in the manufacture of the circuit board and the assembly of the switch, labour costs will decrease by 20%.

Therefore, during the first two years of manufacturing CT2002, the cost benefits of volume purchasing and improved manufacturing processes should decrease the cost to manufacture to around \$7.20

### **3.5 Support**

Our component line has a 90 day tolerance specification warranty and a one year "materials integrity" warranty. No maintenance is required, only replacement after some considerable time. Our replacement rate has been significantly less than 0.1% to date. CT2002 will have a one year warranty on parts and workmanship. We will design the micro fuel cell so that it can be mounted and removed separately. If the customer has a problem, they need only remove the micro fuel cell, replace it with a spare and ship it to us with proof of purchase. The micro fuel cells have an average MTTF of 10,000 hours. We expect a product failure rate within the warranty period of no more than 0.2%. Repairs will not be performed outside of the warranty period, but repairs will be available and CelTek will only charge the materials and labour cost. We have attempted to make it impossible for the customer to replace the integrated fuel cells by themselves. Customers can replace the self-contained micro fuel cells just like a conventional battery, they may purchase spare fuel cells from dealers at retail outlets.

### **3.6 Summary**

CelTek Inc's component products include a series of fuel cells for use in the everyday items. Their high specific energy as well as their small size are useful in high drain applications such as 3<sup>rd</sup> Generation mobile phones and other potential portable devices. The patents are held on design principles of the CT2002 as are several trade secrets involved in the process of manufacturing CT2002 components. The patents are shared with CRC for micro technology.

## **4 The Marketing strategy**

### **4.1 The Market**

The prospect base for our micro fuel cells are the manufacturers of 3G mobile phones. We have concentrated on the cooperation with one of these 3G manufacturers and will be expanding towards other sections of market in the next 5 year-plan. Our initial thrust has been to manufacturers of "3G" products. This will continue to be our primary product, but as our reputation for quality components grows, we will gain new customers and manufacture components for other devices which require long life power supplies. We will concentrate on the high value sections of the market until we can achieve the volumetric cost reduction in production of our micro fuel cells.

#### *4.1.1 Objectives*

The prospective customers for our micro fuel cells are expected to be design engineers who initiate the interest in our products. Their objectives are mainly to integrate the right power source for their products, i.e. 3G mobile phones. The proven superiority of our fuel cells in providing long lasting power supply and with competitive price are going to be the reasons the prospective client wants to purchase from us. As we will cooperate with an industrial partner, a manufacturer of 3G mobile phones, the plan is to set up cooperation with CelTek in the first 5 years.

#### *4.1.2 Segmentation*

The major market segment for our fuel cells is the manufacturer of "3G" mobile telecommunication products, in this case, our industrial partner. There are small secondary market segments of manufacturers of other high drain portable products, under the agreement with our industrial partner we may produce fuel cells for these markets. We will not have our own distributor network for the first four years, however we will handle the wholesale sales through our sales and marketing department.

#### *4.1.3 Size*

We estimate that there are in excess of 10 mobile phone manufacturers, who are developing "3G" mobile phones (BBC News, Friday, 11 May, 2001), and that could be potentially powered by using our micro fuel cells. The annual sales for these products is approximately 400 million units in 2001, and the predicted growth ratio per annum is presently 60%. In future, the 3G mobile phones will take 85% of the total mobile phone market (BBC News, Friday, 11 May, 2001). The value of 3G mobile phones will be excess 100 billion dollars per annum.

#### *4.1.4 Environment*

The trend towards use of more portable devices for outdoor activities ranging from streaming video to mobile internet access, or hybrid computers and phones, to point-of-care medical devices are expected to have a positive influence for the sales of our micro fuel cells. Also military contractors will demand fuel cells as more durable "field" power supplies.

The traditional batteries, even Lithium-ion batteries, are still not capable of providing the high output for applications like real-time video streaming or more complex PDAs. And not like most batteries, ie. Lithium-ion batteries have heavy metal components and thus are environmental hazards, our fuel cells are "clean".

#### *4.1.5 Alternatives*

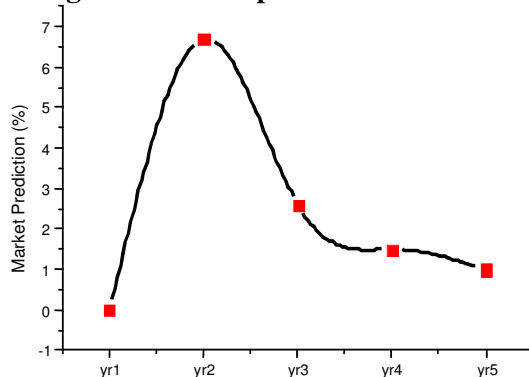
The main reason CelTek Inc was formed was that manufacturers did not have a good alternative to improve the durability of their power supply to their 3G products. Our components are expensive to start off with, but in the long run will result in a more cost effective product and a more satisfied customer. Selling the manufacturer on that concept is our major task.

The CT2002 offers long duration power supply for 3G mobile phones and other PDAs. If the buyer wants to achieve the objective, their alternatives are to use CT2002, or a competitive product when one becomes available, or leave the advanced 3G technologies such as video streaming and internet access out.

### **4.2 Marketing Strategy**

CelTek Inc is entering the market with the CT2002 in the introductory stage of the product type's market life cycle. The intent is to use an aggressive market penetration pricing strategy in concert with a push promotion strategy. We will price CT2002 below the average of competitive product prices during the first several years to achieve significant market penetration. The chart below shows projected market shares over the next five years (Figure 4.1). As the capital limitation at beginning, we will target a small fraction of the big market.

**Figure 4.1 Anticipated market share**



Market share prediction over next the five years shows falling market share as the market enters a phase of rapid expansion. We hope to achieve between 0.5 and 2% of the final market as a starting point. We are being intentionally pessimistic in order to allow for the worst case scenarios.

We plan to do our own core manufacturing and assembling of the CT2002 while pursuing some outside sources for other components. Our major dependence is on the suppliers of injection moulding plastic parts, membranes and packaging assemblies used in the CT2002. CelTek Inc will market the CT2002 using direct sales. CelTek Inc will achieve product promotion with minimal advertising effort and some publicity. The cooperation with the industrial partner will be the key to success. Although we have alternative strategy to market the CT2002 by CelTek alone, the risks and costs are anticipated to be much higher than in cooperation with an industry partner.

#### *4.2.1 Targets*

In the first year of production, we will concentrate on small volume production to 3G manufacturers for the design of their 3G mobile phones. Our objective is to gain reputation as a developer and manufacturer of micro fuel cells, and achieve an agreement of cooperation with a major 3G industrial manufacturer who will provide the cash injection needed for large-scale production.

#### *4.2.2 Promotion*

For our micro fuel cells we are employing a strict PUSH strategy. We do this by convincing the industrial partner to integrate our CT2002 into its 3G mobile phones. The industrial partner's involvement alone can be a strong advertisement for CelTek and will result in gains of reputation for us. Then we will be stronger for the promotion and growth at the end of five years, and we will be able to become more independent later.

Our micro fuel cells are marketed at only one level, to the manufacturers that use micro fuel cells. The manufacturers base their opinion on the price and quality of our component products. Our component products image will be one of "top of the line" in both quality and price. For the CT2002 we want to create an image of the "best" product (in quality, function and dependability) for the most competitive price.

We expect quite a bit of publicity for the CT2002. We will conduct "prototype demonstrations" for representatives from a number of industry publications. We will make arrangements with 3G mobile phone manufacturers to install CT2002 fuel cell series in their mobile phones and will have full press coverage when the installation undergoes field trials.

For all products, we expect our industrial partner to do the bulk of the advertising while they boasting the advanced 3G technology with advanced micro fuel cell technology. We regularly advertise our products in the industrial magazines and exhibitions. We expect to advertise CT2002 during 2003 in two different publications.

#### *4.2.3 Pricing*

We intend to price the CT2002 at the same or lower than the expected competition, our relative small manufacturing and higher quality will offset the small initial production budget. And we intend to devalue the wholesale price of our product in order to remain competitive under the worst case scenario conditions. Listed are the predicted retail prices for the first few years of production.

| Yr1   | Yr2  | Yr3  | Yr4  | Yr5  |
|-------|------|------|------|------|
| \$120 | \$80 | \$75 | \$35 | \$23 |

#### *4.2.4 Sales*

We currently have one staff looking after marketing and sales, who is responsible for interfacing with CRC, and potential industrial partners. The marketing manager creates all promotional materials and provides them to the potential industrial partners. We plan to train one technical specialist to help the 3G manufacturer to integrate our micro fuel cell into their mobile phones. We will hire a chief executive officer to act as representative of the company in negotiations with potential partners.

#### *4.2.5 Distribution*

The distribution of our micro fuel cells will exclusively through CelTek directly. We will supply the part to manufacturers for installation into their phones. Shipping and handling are not a major burden as the parts are extremely small.

#### 4.2.6 Support

Our component line has a 90 day tolerance specification warranty and a one year "materials integrity" warranty. No maintenance is required, only replacement. We will have a customer support group for the CT2002. Reorder points and quantities will be determined as we gain experience.

### 4.3 Competitive Analysis

There are four major enterprises who are CelTek Inc's most likely near term competitors, the strongest being Manhattan Scientifics. A list of these competitors is shown below.

- Motorola
- Samsung
- Toshiba
- Manhattan Scientifics

In general, there is no company has developed a commercial viable micro-fuel cells. However, because of the great potential market volume in the future, many companies have put great financial and personnel efforts toward developing marketable fuel cells for the portable devices.

To identify the feasibilities of setting up CelTek, we compare CelTek Inc to the competitors. The following table shows that all competitors are more experienced and have more financial clout than CelTek Inc. But all of the competitor are not from a micro machining background, they are probably using traditional manufacturing methods to make fuel cells small. The traditional manufacturing techniques have much larger material cost, and lower efficiency, so CelTek feels it can be competitive by using micro tech to make it smaller and cheaper as well as more reliable.

| Competitor | Experience | Staying Power | Marketing Strength | Freedom of Action | Cost/unit |
|------------|------------|---------------|--------------------|-------------------|-----------|
| CelTek Inc | LOW        | LOW           | LOW                | HIGH              | LOW       |
| Motorola   | HIGH       | HIGH          | HIGH               | LOW               | HIGH      |
| Samsung    | MED        | MED           | MED                | MED               | HIGH      |
| Toshiba    | HIGH       | HIGH          | MED                | LOW               | HIGH      |
| Manhattan  | MED        | LOW           | LOW                | MED               | MED       |

However, due to the higher power of these industrial giants, we don't feel we will be able to protect either our Intellectual Property or our market share. So, at the second stage, we will cooperate with CRC to find a industrial partner, who can compete with these giants, or choose one of them to be our partner to produce and market our micro-fuel-cells.

## **5 Operations**

### **5.1 Purchasing plans**

Accessory components will be mostly out-sourced locally, and membranes and electrodes will be purchased from Dupont Chemical Ltd. In the meantime, the core assembly and technical sensitive production will be held in CelTek, and the materials, such as Platinum, will be purchased from South Africa.

### **5.2 Production Plan**

As CelTek is a high-tech company, we intend to keep the core manufacturing within CelTek. To reduce the initial capital investment, we plan on out-sourcing most of the accessory components. The core production includes micro machining process and final assembly. At the first stage, we plan on a small volume of production, and a cost per unit around \$65. At the second stage, with large-scale production, the cost per unit will drop as low as \$9. Further reduction of 20% production cost is possible in the next 5 years.

### **5.3 Margin**

The margins that we have used in the financial plan are based on current price of the components required to produce the micro fuel cell and the market demand for the new battery technology. The production of a Micro fuel cell will cost about half of the sale price and we are going to sell them at a reducing profit as volume increases. With this figure, we have predicted that the sales profit will cover the operation costs, research costs, loan repayments and still provide us some margin for an expansion of the manufacturing facilities in the future.

### **5.4 Operating Complexity**

The price per unit of CelTek Micro fuel cell initially will be more expensive than the Li-Ion which will reflect the quality and innovation of the product. Li-Ion is currently dominating the Battery cell technology, but fuel cells will become cheaper once the mass production is started. The CelTek micro fuel cell will have some advantages such as higher power density, longer usage time and faster recharge times when compared to the Li-Ion. These are the primary motivation of the research by CelTek in the micro fuel cell. The advantages of Direct Methanol Fuel Cell are as follows:

- ⇒ Higher power density
- ⇒ Smaller size
- ⇒ Lighter: 6-7 times the energy per unit mass of Li-Ion.

- ⇒ Longer usage time: 18-27 hours talk-time and 41 days standby time compare to 5 hours talk-time and 11 days standby time for Li-Ion.
- ⇒ Cleaner: CelTek Micro fuel cell does not have the conventional battery disposal and recycle problem. It uses methanol for its fuel and therefore it would be an environmentally friendly product.
- ⇒ Faster recharge times: Li-Ion recharge in 30-60 minutes while CelTek micro fuel cell recharge in less than a minute.
- ⇒ And less expensive: In mass production CelTek micro fuel cell will cost lower than Li-Ion cost that is currently cost \$10-\$16 per unit.

With those powerful features we targeted our market at the 3G mobile phones which typically have large colour screen display and will be loaded with energy hungry features such as internet capability, video camera, video conferencing features, operate as a remote for your stereo as well as open your garage door. The current Li-Ion technology has insufficient power output for the future mobile phones which is holding back the development of these 3<sup>rd</sup> Generation products. Lithium-Ion will only give half an hour of usage time when the 3G power hunger features is activated.

The fuel supply to the micro fuel cells is also a critical issue. The fuel is a mixture of 40% methanol with the rest of pure water. The concentration of the fuel combination is safe in the public domain. To concentrate on our main business, we plan to design the fuel container and license it to a local company to manufacture it.

## **5.5 Resources Required**

CelTek Inc currently leases 200 square meters of a combination of office and laboratory space. Major fabrication equipment is leased from CRC for micro technology and Swinburne University, including Excimer laser NC machine, AVIA laser cutting machine, hot embossing machine, and micro milling machine. As we enter into the development stage of micro fuel cell series, CT2002, we will add micro injection molding machine with class 100 clean environments. While majority of the parts are out-sourced from sub-contractors, the core assembly and micro channel machining is conducted within CelTek. The process of hybrid micro injection molding the components is accomplished with technology proprietary to CelTek Inc. The production is based on orders, with just-in-time delivered components from an outside agency, and then packaged in CelTek and shipped to the customer from our delivering centre.

## 6 Management

CelTek already started its project management practice through its initial project planning during stage one. As a result, we learnt how to balance the time, cost, and performance to manage our work load for good progress. It's critical to correctly apply the advanced management tools as they provide the business with knowledge and skills to manage projects and activities in order to meet or exceed stakeholder needs and expectations. CelTek plans to exceed to expectations of stakeholders with respect to industry best practice.

We at CelTek understand that we are marching into a battle in the high tech field. Good management must bring together a group of people, who have diverse talents, and more diverse experiences. Internally, we respect individual expertise, and encourage teamwork. We explore and implement good strategies based on the resolutions of our think tank. Externally, we need to manage an industrial alliance with a "big brother". Based on our CRC partnership and our individual strengths, we are confident we will overcome most difficulties, such as ISO 9000 certification, and settling occupational, health & safety issues, as well as managing any environmental impact of the production process.

CelTek has been using the S.W.O.T. analysis as the management tool to establish its business's future direction. Strategically, we will focus on marketing, production, human resources, innovation and finance. Through conducting the S.W.O.T. analysis of the above sectors, CelTek found that the perceived strengths and weakness of competitors are the source of CelTek's opportunities and threats. Please refer to the related sections for more details. A summary of our S.W.O.T. analysis is provided in section 6.4 below.

### 6.1 Company Founders

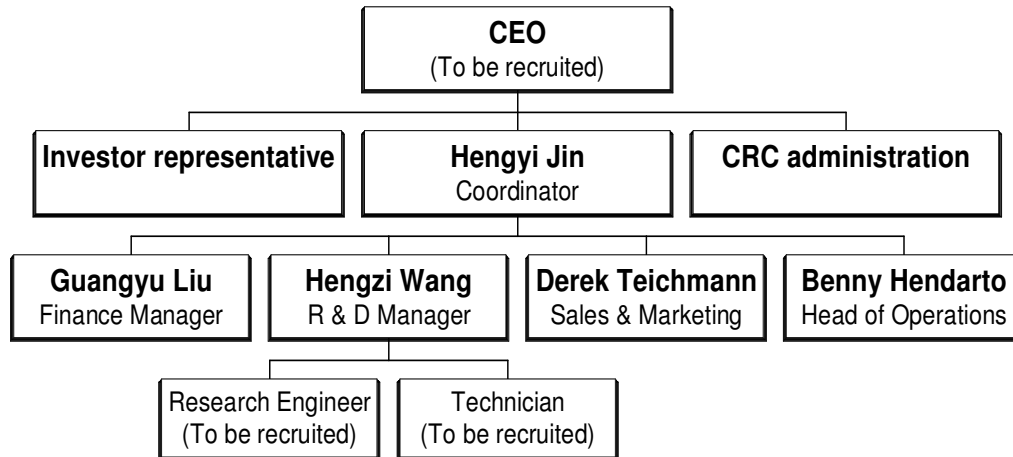
The company founders in brief.

- ⇒ Hengzi Wang – Manager for Research & Development
- ⇒ Guangyu Liu – Manager for Finance
- ⇒ Hengyi Jin – Personnel Manager and Co-ordinator
- ⇒ Derek Teichmann – Sales and Marketing Manager
- ⇒ Benny Hendarto – Operational Manager

The biographies of the founders can be found in the Management Team section. Several key people are being actively sought. Details of those positions are detailed as summarised in Management Team Gaps.

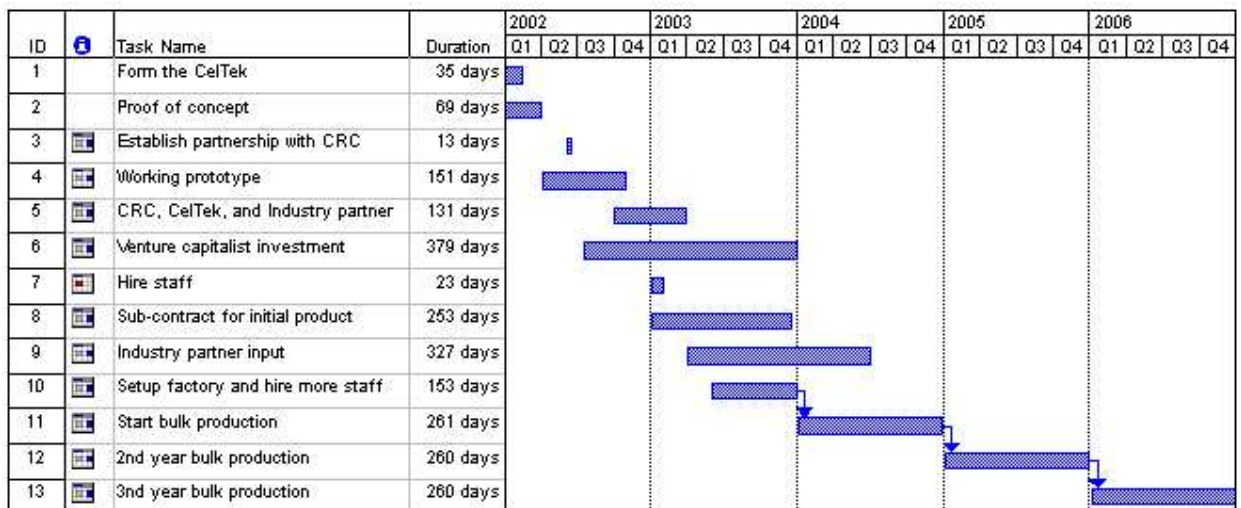
## 6.2 Organisational Structure

### Organisational Chart



CelTek started out with a flat management structure. When it starts up small scale production, CelTek will have to recruit a CEO (see Management Team Gaps), who will oversee departmental managers. It also needs a full time technician and a design engineer. External consultants will handle certain tasks during the early stages. By the end of the fourth year of operation, the company will become a small giant enterprise, which will operate its production in large scale, and consist of more than 35 personnel in total.

## 6.3 CelTek's Gantt chart



## 6.4 SWOT analysis

CelTek's strategies are developed to accentuate our strengths and maximize our opportunities while minimizing the threats and weaknesses.

| STRENGTHS   | WEAKNESSES   |
|---|--|
| High level of technical expertise<br>Focus on a narrow but lucrative part of the market<br>Strong selling advantage due to excitement with new tech and alternative energy in current market<br>Collaboration with established industry partner (planned) | Inexperienced in business<br>Introducing a new technology<br>Facing a sceptical market and manufacturers<br>Further increases in interest rates may make obtaining money difficult<br>Large amount of Capital required for development and manufacturing |
| OPPORTUNITIES   | THREATS  |
| Billion dollar market<br>Advances in micro technology<br>Interest and agreement gained from the CRC for micro technology for development support  | List of known competitors<br>Possible improvement in the current battery technology<br>Discovery of new energy technologies i.e. body heat energy, solar power   |

## 7 Financial Analysis

### 7.1 Funding

CelTek Inc is seeking an amount of \$3,000,000 equity investment by venture capitalists at the beginning of the business. Our industry partner will offer an additional investment of \$4,000,000 before production begins on a large scale. We don't intend to take out loans to establish the business, but it may become necessary to cover short term shortfalls during production.

### 7.2 Use of Funds

During the initial 25 month period before we achieve a break even cash flow, investment funds will be used for growing CelTek Inc. and starting up production on a small scale. Estimates for the first year expenditure are as follows:

|   |           |             |
|---|-----------|-------------|
| Forming CelTek                              |           |             |
| Office equipment                            | \$19,000  |             |
| Communications                              | \$1,000   |             |
| Proof of concept                            | \$20,000  |             |
| Partnership with CRC                        | \$1,000   |             |
| Working prototype                           | \$500,000 |             |
| CRC, CelTek, and industry partner operation | \$200,000 |             |
| Sub-contract for initial production         | \$975,000 |             |
|   |           |             |
|   | TOTAL     | \$1,715,000 |

### 7.3 Assumptions/Trends/Comparatives

#### 7.3.1 Assumptions

- (i) Selling price and volume is accurately predicted through market analysis. (For example, selling price of \$65 per unit and 500,000 in volume in 2004.)
- (ii) New technology has competitive advantages.
- (iii) It is assumed that customer pays in advance for products.
- (iv) The time for the depreciation of capital assets in the form of equipment is assumed to be 7 years and in the form of buildings is 39 years.
- (v) Tax rates during mass production are on average 18% for 2004, 25% for 2005 and 30% for 2006.

### 7.3.2 Trends

- (i) 60% growth in mobile phone market.
- (ii) Increased numbers of portable devices with integral power supplies

### 7.3.3 Comparatives

In worst case, the actual selling price and selling volume are lower than the predicted. As a result, the time to breakeven in the profit & loss analysis will be postponed for a few months longer than expected. Conversely, it may be reached earlier by a couple of months in the best case.

## 7.4 Cash Flow Statement

The formation of the group with support of the CRC, CelTek, the business needs some funds to be deposited in first year to maintain cash flow. After production begins the returns begin and after a further injection of cash by the industry partner to kick off bulk production. The remaining net cash flow for the remaining years grows at an increasing rate in the following years. The cash will be sufficient to offset expenses for outsourcing and bulk production. Figure 7.1 (a) and (b) are charts illustrating monthly cash flow in 2002 and yearly cash flow from 2002 until 2006. For more details in the cash flow refer the monthly, quarterly cash flow and yearly cash flow tables in appendix.

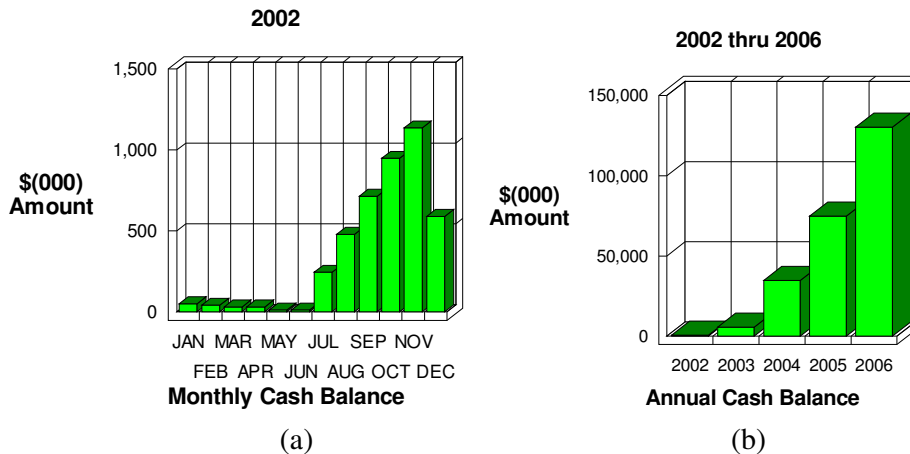


Figure 7.1— Chart (a) and (b) illustrate monthly cash flow in 2002 and yearly cash flow from 2002 until 2006.

## 7.5 Income Statement

Income statement tables in the appendix report the income/expense/ profit figures in detail; monthly for first year, quarterly for second year and yearly for the five-year period at the end of this section. The yearly net profit crawls to over 27 million

dollars in five years. Figure 7.2 shows the graph of the five year revenue/expense/pre-tax profit chart. A strong growth of pre-tax profit can be seen from 2004 to 2006.

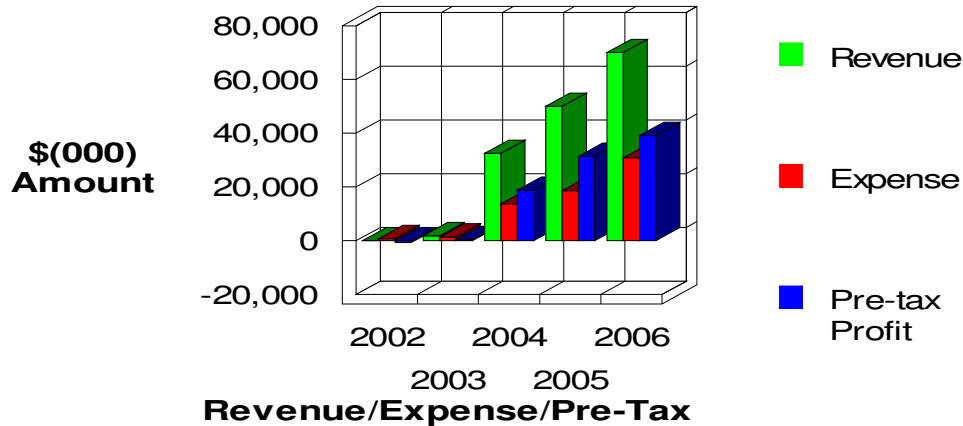


Figure 7.2— Five year income/expense/pre-tax profit comparison

## 7.6 Balance Sheet

The balance sheet over the 5 years is shown in appendix. At the end of first year, the total owner's equity is \$746,024 and reaches an amount of \$73,027,410 at the end of the five year period. It is in the order of ten times the initial investment from industry partners and venture capitalists combined.

## 7.7 Break Even Analysis

The chart of figure 7.3 displays the cumulative net profit and loss in the five year period. The break even point occurs at 25th month where the total revenues matches the total expenses. After production through outsourcing begins, the income begins to outgrow the expenses. With the start up of bulk production, the curve rises steeply to begin making a profit after the first months production. Strong growth is then shown in following years.

## 7.8 Return on Investment

On the basis of market analysis and financial analysis, we believe that within five years, the business will be so successful that there will be numerous potential customers to purchase our products. Investors will see a substantial return on investment and it may become appropriate to take the company public with the cooperation of the industry partner and initiate a further period of growth .

## Profit/Loss Chart

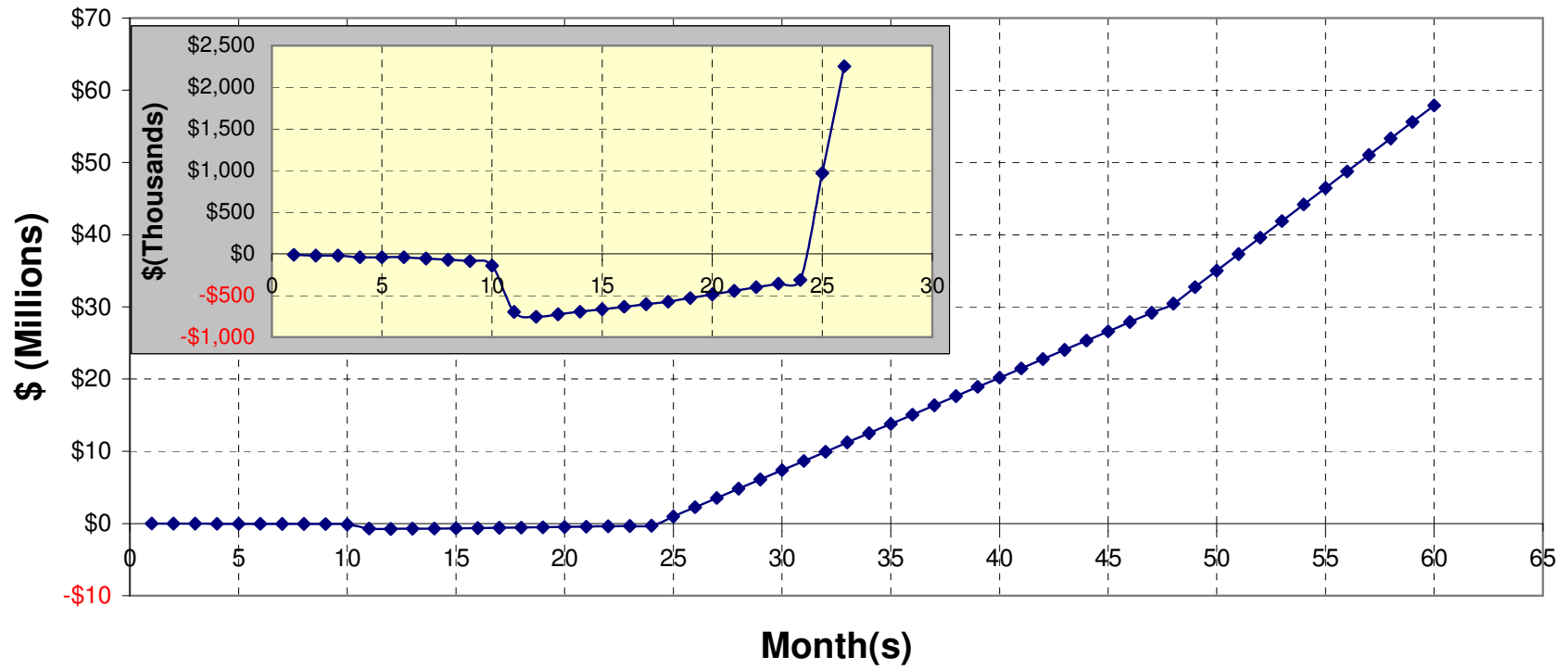


Figure 7.3—Profit&Loss Chart Accumulatively by Months

## **8 Offering**

### **8.1 CelTek Proposal**

CelTek is offering a 60% share of the company as it stands today. Each of the founders will hold 4% and the CRC will hold the remaining 20%. The 60% represents 3 million dollars of required venture capital. The Return On Investment (ROI) is expected to be 100% in three years and if shareholders wish they can convert their investment to a 30% holding in the expanded company for an expected return of 300% on the initial investment after five years. Exit points are at three and five years and if the company lists on the share market at that time conversion into public shares will likely be possible.

CelTek Inc is seeking an amount of \$3,000,000 equity investment by venture capitalists at the beginning of the business. Our industry partner will offer an additional investment of \$4,000,000 before production begins on the large scale.

### **8.2 Summary**

CelTek represents a medium to high risk investment with commensurate returns. Strategies have been put in place to minimise risk where possible, such as industry association to prevent pirating of the Intellectual Property by powerful industry players and to guarantee a market. The market for the product clearly exists, and the race is now on to see who can manufacture an affordable and functional design and bring it to the market. The risk is in potential difficulties with developing the technology. Profits are virtually assured as the market for new high energy demanding devices grows. Also as the mobile phone continues to play a greater role in our lives; from banking to operating home appliances, it will be more and more critical to have a power supply that can handle the heavy duty cycles, and be quick to recharge. CelTek potentially provides such a solution and with your backing we could be at the right place at the right time.

## Appendix

### A Brief Introduction to the Principle Behind the Fuel Cell

When combusting hydrogen with oxygen, the electrons surrounding the atom of hydrogen are stripped and flow to the atoms of oxygen. This results in the formation of electrical potential between the hydrogen and oxygen. However, because of the chaotic nature of combustion, the energy is changed to heat due to irregular movement of electrons. The purpose of fuel cell is to put the flow of electrons in order and form an electrical current. So a fuel cell is a device that generates electricity by a chemical reaction. Every fuel cell has two electrodes, one positive and one negative, called, respectively, the cathode and anode. The reactions that produce electricity take place at the electrodes. Every fuel cell also has an electrolyte, which carries electrically charged particles from one electrode to the other, and a catalyst, which speeds the reactions at the electrodes. Hydrogen is the basic fuel, but fuel cells also require oxygen. A single fuel cell generates a tiny amount of direct current (DC) electricity. In practice, many fuel cells are usually assembled into a stack to generate larger currents.

The electrolyte is very important part, for it must permit only the appropriate ions to pass between the anode and cathode.

For portable devices, methanol is the first choice as the hydrogen source. The technology for this kind of fuel cell is 'direct methanol type' fuel cell (DMFC), which has an operating temperature typically about 45 °C and an efficiency of about 20%. DMFC's use a polymer membrane as the electrolyte.

The reasons for using DMFC for portable devices are,

- ⇒ In DMFC, the anode catalyst itself draws the hydrogen from the liquid methanol, eliminating the need for a fuel reformer.
- ⇒ Using dry polymer membrane instead of liquid membrane.
- ⇒ Methanol is cheap, it costs about 39 cents US per gallon.
- ⇒ Can be operated at room temperature. (However, higher temperatures give higher efficiencies).
- ⇒ They have high specific energy.

## Financial tables

### Year 1 Cash Flow

|                      | JAN      | FEB      | MAR      | APR      | MAY      | JUN      | JUL       | AUG       | SEP       | OCT       | NOV         | DEC         | TOTAL       |
|----------------------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|
| Source of Funds      |          |          |          |          |          |          |           |           |           |           |             |             |             |
| Beginning cash       | \$50,000 | \$49,863 | \$39,863 | \$30,000 | \$29,726 | \$10,000 | \$9,986   | \$244,000 | \$479,000 | \$714,000 | \$948,452   | \$1,136,603 | \$50,000    |
| Sales / Svcs Income  | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0           | 0           | 0           |
| Sale of Assets       | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0           | 0           | 0           |
| Customer deposits    | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0           | 0           | 0           |
| Loans                | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0           | 0           | 0           |
| Contributed Capital  | 0        | 0        | 0        | 0        | 0        | 0        | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000   | \$250,000   | \$1,500,000 |
| Available Cash       | \$50,000 | \$49,863 | \$39,863 | \$30,000 | \$29,726 | \$10,000 | \$259,986 | \$494,000 | \$729,000 | \$964,000 | \$1,198,452 | \$1,386,603 | \$1,550,000 |
| Use of Funds         |          |          |          |          |          |          |           |           |           |           |             |             |             |
| Salaries             | 0        | 0        | 0        | 0        | 0        | 0        | \$15,000  | \$15,000  | \$15,000  | \$15,000  | \$15,000    | \$15,000    | \$90,000    |
| Other oper. Expenses | \$137    | \$10,000 | \$9,863  | \$274    | \$19,726 | \$14     | \$986     | 0         | 0         | \$548     | \$46,849    | \$533,151   | \$621,548   |
| Loan payments        | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0           | 0           | 0           |
| Capital Expenditures | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0           | \$250,000   | 250,000     |

|                |          |          |          |          |          |         |           |           |           |           |             |           |           |
|----------------|----------|----------|----------|----------|----------|---------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|
| Dividends      | 0        | 0        | 0        | 0        | 0        | 0       | 0         | 0         | 0         | 0         | 0           | 0         | 0         |
| Tax Payments   |          |          | 0        |          |          | 0       |           |           | 0         |           |             | 0         | 0         |
| Total Cash Out | \$137    | \$10,000 | \$9,863  | \$274    | \$19,726 | \$14    | \$15,986  | \$15,000  | \$15,000  | \$15,548  | \$61,849    | \$798,151 | \$961,548 |
|                |          |          |          |          |          |         |           |           |           |           |             |           |           |
| Net Cash Flow  | \$49,863 | \$39,863 | \$30,000 | \$29,726 | \$10,000 | \$9,986 | \$244,000 | \$479,000 | \$714,000 | \$948,452 | \$1,136,603 | \$588,452 | \$588,452 |

Year 2 Cash Flow

|                      | Q1          | Q2          | Q3          | Q4          | Totals      |
|----------------------|-------------|-------------|-------------|-------------|-------------|
| Beginning cash       | \$588,452   | \$1,735,288 | \$2,828,288 | \$4,198,137 | \$588,452   |
| Sales/Svcs Income    | \$450,000   | \$450,000   | \$450,000   | \$450,000   | \$1,800,000 |
| Sale of Assets       | 0           | 0           | 0           | 0           | 0           |
| Customer deposits    | \$243,750   | \$243,750   | \$243,750   | \$243,750   | \$975,000   |
| Loans                | 0           | 0           | 0           | 0           | 0           |
| Contributed Capital  | \$750,000   | \$750,000   | \$1,000,000 | \$1,000,000 | \$3,500,000 |
| Available Cash       | \$2,032,202 | \$3,179,038 | \$4,522,038 | \$5,891,887 | \$6,863,452 |
| Use of Funds         |             |             |             |             |             |
| Salaries             | \$67,000    | \$67,000    | \$67,000    | \$67,000    | \$268,000   |
| Other oper. expenses | \$229,914   | \$283,750   | \$256,901   | \$243,750   | \$1,014,315 |
| Loan payments        | 0           | 0           | 0           | 0           | 0           |
| Capital Expenditures | 0           | 0           | 0           | 0           | 0           |
| Dividends            | 0           | 0           | 0           | 0           | 0           |
| Tax Payments         | 0           | 0           | 0           | 0           | 0           |
| Total Cash Out       | \$296,914   | \$350,750   | \$323,901   | \$310,750   | \$1,282,315 |
| Net Cash Flow        | \$1,735,288 | \$2,828,288 | \$4,198,137 | \$5,581,137 | \$5,581,137 |

5-Year Cash Flow

|                      | 2002        | 2003        | 2004         | 2005          | 2006          |
|----------------------|-------------|-------------|--------------|---------------|---------------|
| Source of Funds      |             |             |              |               |               |
| Beginning cash       | \$50,000    | \$588,452   | \$5,581,137  | \$34,733,498  | \$74,796,326  |
| Sales/Svcs Income    | \$0         | \$1,800,000 | \$32,500,000 | \$50,000,000  | \$70,000,000  |
| Sale of Assets       | \$0         | \$0         | \$0          | \$0           | \$0           |
| Customer deposits    | \$0         | \$975,000   | \$12,500,000 | \$17,000,000  | \$28,000,000  |
| Loans                | \$0         | \$0         | \$0          | \$0           | \$0           |
| Contributed Capital  | \$1,500,000 | \$3,500,000 | \$2,000,000  | \$0           | \$0           |
| Available Cash       | \$1,550,000 | \$6,863,452 | \$52,581,137 | \$101,733,498 | \$172,796,326 |
| Use of Funds         |             |             |              |               |               |
| Salaries             | \$90,000    | \$268,000   | \$900,000    | \$1,440,000   | \$2,580,000   |
| Other oper. expenses | \$621,548   | \$1,014,315 | \$11,571,096 | \$16,659,315  | \$27,130,479  |
| Loan payments        | \$0         | \$0         | \$0          | \$0           | \$0           |
| Capital Expenditures | \$250,000   | \$0         | \$2,000,000  | \$1,000,000   | \$1,000,000   |
| Dividends            | \$0         | \$0         | \$0          | \$0           | \$0           |
| Tax Payments         | \$0         | \$0         | \$3,376,543  | \$7,837,857   | \$11,761,929  |
| Total Cash Out       | \$961,548   | \$1,282,315 | \$17,847,639 | \$26,937,172  | \$42,472,408  |
| Net Cash Flow        | \$588,452   | \$5,581,137 | \$34,733,498 | \$74,796,326  | \$130,323,918 |

Year 1 Income/Expense

|                           | JAN | FEB | MAR | APR | MAY | JUN | JUL      | AUG      | SEP      | OCT      | NOV      | DEC      | TOTAL    |
|---------------------------|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|----------|----------|----------|
| Revenue:                  |     |     |     |     |     |     |          |          |          |          |          |          |          |
| Product / Service sales   |     |     |     |     |     | 0   | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Maintenance               |     |     |     |     |     |     |          |          |          |          |          |          | 0        |
| Consulting Services       |     |     |     |     |     |     |          |          |          |          |          |          | 0        |
| Royalties                 |     |     |     |     |     |     |          |          |          |          |          |          | 0        |
| Interest                  |     |     |     |     |     |     |          |          |          |          |          |          | 0        |
| Other                     |     |     |     |     |     |     |          |          |          |          |          |          | 0        |
| Cust. Dep./Sale of Assets | 0   | 0   | 0   | 0   | 0   | 0   | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Total revenue             | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0      | \$0      | \$0      | \$0      | \$0      | \$0      | \$0      |
| Expenses:                 |     |     |     |     |     |     |          |          |          |          |          |          |          |
| Cost of goods sold        |     |     |     |     |     |     |          |          |          |          |          |          |          |
| Management Salaries       |     |     |     |     |     |     | \$12,500 | \$12,500 | \$12,500 | \$12,500 | \$12,500 | \$12,500 | \$75,000 |
| Non-management Salaries   |     |     |     |     |     |     | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Production Expenses       |     |     |     |     |     |     |          |          |          |          |          |          | 0        |
| Other                     | 0   | 0   |     | 0   |     | 0   |          |          |          | 0        | 0        | 0        | 0        |

|                          |            |            |       |            |       |           |            |            |            |            |             |            |             |
|--------------------------|------------|------------|-------|------------|-------|-----------|------------|------------|------------|------------|-------------|------------|-------------|
|                          |            |            |       |            |       |           |            |            |            |            |             |            |             |
| Gross margin             | \$0        | \$0        | \$0   | \$0        | \$0   | \$0       | (\$12,500) | (\$12,500) | (\$12,500) | (\$12,500) | (\$12,500)  | (\$12,500) | (\$75,000)  |
| Management Salaries      |            |            |       |            |       |           | 2,500      | 2,500      | 2,500      | 2,500      | 2,500       | 2,500      | 15,000      |
| Non-management Salaries  |            |            |       |            |       |           |            |            |            |            |             |            | 0           |
| Operating Expenses       | \$10,000   | \$10,000   |       | \$20,000   |       | \$1,000   |            |            | 0          | \$40,000   | \$540,000   | \$40,000   | \$661,000   |
| Bad debt                 |            |            |       |            |       |           |            |            |            |            |             |            | 0           |
| Contributions            |            |            |       |            |       |           |            |            |            |            |             |            | 0           |
| Depreciation             | 0          | 0          | 0     | 0          | 0     | 0         | 0          | 0          | 0          | 0          | 0           | \$2,976    | \$2,976     |
| Loan Payment Interest    | 0          | 0          | 0     | 0          | 0     | 0         | 0          | 0          | 0          | 0          | 0           | 0          | 0           |
| Other                    |            |            |       |            |       |           |            |            |            |            |             |            | 0           |
| Total Operating Expenses | \$10,000   | \$10,000   | \$0   | \$20,000   | \$0   | \$1,000   | \$2,500    | \$2,500    | \$2,500    | \$42,500   | \$542,500   | \$45,476   | \$678,976   |
| Pre-Tax (\$)             | (\$10,000) | (\$10,000) | \$0   | (\$20,000) | \$0   | (\$1,000) | (\$15,000) | (\$15,000) | (\$15,000) | (\$55,000) | (\$555,000) | (\$57,976) | (\$753,976) |
| Pre-Tax (%)              | 0.00%      | 0.00%      | 0.00% | 0.00%      | 0.00% | 0.00%     | 0.00%      | 0.00%      | 0.00%      | 0.00%      | 0.00%       | 0.00%      | 0.00%       |
| Fed. Tax Provision       |            |            |       |            |       |           |            |            |            |            |             |            | 0           |
| Dividends                |            |            |       |            |       |           |            |            |            |            |             |            | 0           |
| Net Profit               | (\$10,000) | (\$10,000) | \$0   | (\$20,000) | \$0   | (\$1,000) | (\$15,000) | (\$15,000) | (\$15,000) | (\$55,000) | (\$555,000) | (\$57,976) | (\$753,976) |

Year 2 Income/Expense

|                           | Q1        | Q2        | Q3        | Q4        | Total       |
|---------------------------|-----------|-----------|-----------|-----------|-------------|
| Revenue:                  |           |           |           |           |             |
| Product/service sales     | \$450,000 | \$450,000 | \$450,000 | \$450,000 | \$1,800,000 |
| Maintenance               |           |           |           |           | \$0         |
| Consulting Services       |           |           |           |           | \$0         |
| Royalties                 |           |           |           |           | \$0         |
| Interest                  |           |           |           |           | \$0         |
| Other                     |           |           |           |           | \$0         |
| Cust. Dep./Sale of Assets | \$0       | \$0       | \$0       | \$0       | \$0         |
| Total revenue             | \$450,000 | \$450,000 | \$450,000 | \$450,000 | \$1,800,000 |
| Expenses:                 |           |           |           |           |             |
| Cost of goods sold        |           |           |           |           |             |
| Management Salaries       | \$37,500  | \$37,500  | \$37,500  | \$37,500  | \$150,000   |
| Non-management Salaries   | \$17,500  | \$17,500  | \$17,500  | \$17,500  | \$70,000    |
| Production Expenses       | \$243,750 | \$243,750 | \$243,750 | \$243,750 | \$975,000   |
| Other                     | \$0       | \$0       |           |           | \$0         |
| Gross margin              | \$151,250 | \$151,250 | \$151,250 | \$151,250 | \$605,000   |
| Management Salaries       | \$8,000   | \$8,000   | \$8,000   | \$8,000   | \$32,000    |
| Non-management Salaries   | \$4,000   | \$4,000   | \$4,000   | \$4,000   | \$16,000    |
| Operating Expenses        | \$40,000  | \$40,000  | \$0       | \$0       | \$80,000    |
| Bad debt                  |           |           |           |           | \$0         |
| Contributions             |           |           |           |           | \$0         |
| Depreciation              | \$8,929   | \$8,929   | \$8,929   | \$8,929   | \$35,714    |
| Loan Payment Interest     | 0         | 0         | 0         | 0         | 0           |
| Other                     |           |           |           |           | 0           |
| Total Operating Expenses  | \$60,929  | \$60,929  | \$20,929  | \$20,929  | \$163,714   |
| Pre-Tax (\$)              | \$90,321  | \$90,321  | \$130,321 | \$130,321 | \$441,286   |
| Pre-Tax (%)               | 20.07%    | 20.07%    | 28.96%    | 28.96%    | 24.52%      |
| Fed. Tax Provision        |           |           |           |           | 0           |
| Dividends                 |           |           |           |           | 0           |
| Net Profit                | \$90,321  | \$90,321  | \$130,321 | \$130,321 | \$441,286   |

## 5 Year Income/Expenses

|                           | 2002        | 2003        | 2004         | 2005         | 2006         |
|---------------------------|-------------|-------------|--------------|--------------|--------------|
| Revenue:                  |             |             |              |              |              |
| Product/service sales     | \$0         | \$1,800,000 | \$32,500,000 | \$50,000,000 | \$70,000,000 |
| Maintenance               | \$0         | \$0         |              |              |              |
| Consulting Services       | \$0         | \$0         |              |              |              |
| Royalties                 | \$0         | \$0         |              |              |              |
| Interest                  | \$0         | \$0         |              |              |              |
| Other                     | \$0         | \$0         |              |              |              |
| Cust. Dep./Sale of Assets | \$0         | \$0         | \$0          | \$0          | \$0          |
| Total revenue             | \$0         | \$1,800,000 | \$32,500,000 | \$50,000,000 | \$70,000,000 |
| Expenses:                 |             |             |              |              |              |
| Cost of Goods Sold        |             |             |              |              |              |
| Management Salaries       | \$75,000    | \$150,000   | \$400,000    | \$400,000    | \$550,000    |
| Non-management Salaries   | \$0         | \$70,000    | \$350,000    | \$800,000    | \$1,600,000  |
| Production Expenses       | \$0         | \$975,000   | \$12,500,000 | \$17,000,000 | \$28,000,000 |
| Other                     |             |             |              |              |              |
| Gross margin              | (\$75,000)  | \$605,000   | \$19,250,000 | \$31,800,000 | \$39,850,000 |
| Management Salaries       | \$15,000    | \$32,000    | \$80,000     | \$80,000     | \$110,000    |
| Non-management Salaries   | \$0         | \$16,000    | \$70,000     | \$160,000    | \$320,000    |
| Operating Expenses        | \$661,000   | \$80,000    | \$20,000     | \$30,000     | \$35,000     |
| Bad debt                  | \$0         | \$0         |              |              |              |
| Contributions             | \$0         | \$0         |              |              |              |
| Depreciation              | \$2,976     | \$35,714    | \$321,429    | \$178,571    | \$178,571    |
| Loan Payment Interest     | \$0         | \$0         | \$0          | \$0          | \$0          |
| Other                     |             |             |              |              |              |
| Total Operating Expenses  | \$678,976   | \$163,714   | \$491,429    | \$448,571    | \$643,571    |
| Pre-Tax Income            | (\$753,976) | \$441,286   | \$18,758,571 | \$31,351,429 | \$39,206,429 |
| Pre-Tax (%)               | \$0         | \$0         | \$1          | \$1          | \$1          |
| Fed Tax Provision         | \$0         | \$0         | \$3,376,543  | \$7,837,857  | \$11,761,929 |
| Dividends                 | \$0         | \$0         |              |              |              |
| Net Profit                | (\$753,976) | \$441,286   | \$15,382,029 | \$23,513,571 | \$27,444,500 |

| Balance Sheet                | 2002        | 2003        | 2004         | 2005         | 2006          |
|------------------------------|-------------|-------------|--------------|--------------|---------------|
| Current Assets:              |             |             |              |              |               |
| Cash                         | \$588,452   | \$5,581,137 | \$34,733,498 | \$74,796,326 | \$130,323,918 |
| Accounts Receivable          | 0           | 0           | 0            | 0            | 0             |
| Inventories                  | 0           | 0           | 0            | 0            | 0             |
| Historical Other             | 0           | 0           | 0            | 0            | 0             |
| Total Current Assets         | \$588,452   | \$5,581,137 | \$34,733,498 | \$74,796,326 | \$130,323,918 |
| Fixed Assets:                |             |             |              |              |               |
| Buildings & Equipment        | \$250,000   | \$250,000   | \$2,250,000  | \$3,250,000  | \$4,250,000   |
| Non-depreciable assets       | 0           | 0           | 0            | 0            | 0             |
| Less Accum Deprec.           | (\$2,976)   | (\$38,690)  | (\$360,119)  | (\$538,690)  | (\$717,262)   |
| Total Fixed Assets           | \$247,024   | \$211,310   | \$1,889,881  | \$2,711,310  | \$3,532,738   |
| Other Assets                 | 0           | 0           | 0            | 0            | 0             |
| Total Assets                 | \$835,476   | \$5,792,447 | \$36,623,379 | \$77,507,636 | \$133,856,656 |
| Current Liabilities:         |             |             |              |              |               |
| Accounts Payable             | \$39,452    | \$80,137    | \$1,029,041  | \$1,399,726  | \$2,304,247   |
| Short Term Loans             | 0           | 0           | 0            | 0            | 0             |
| Other short term liabilities | \$50,000    | \$50,000    | \$1,025,000  | \$13,525,000 | \$30,525,000  |
| Historical Other             | 0           | 0           | 0            | 0            | 0             |
| Total Current Liabilities    | \$89,452    | \$130,137   | \$2,054,041  | \$14,924,726 | \$32,829,247  |
| Cust. Dep. Liability         | 0           | \$975,000   | \$12,500,000 | \$17,000,000 | \$28,000,000  |
| Long-term Liabilities        | 0           | 0           | 0            | 0            | 0             |
| Total Liabilities            | \$89,452    | \$1,105,137 | \$14,554,041 | \$31,924,726 | \$60,829,247  |
| Stockholder's Equity:        |             |             |              |              |               |
| Contributed Capital          | \$1,500,000 | \$5,000,000 | \$7,000,000  | \$7,000,000  | \$7,000,000   |
| Retained Earnings            | (\$753,976) | (\$312,690) | \$15,069,338 | \$38,582,910 | \$66,027,410  |

|   |           |
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