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BUSINESS **9609/32**

Paper 3 Case Study **February/March 2020**

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INFORMATION

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- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.

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Fujin Energy (FE)

FE's core business is manufacturing wind turbines for generating electricity (see Appendix 1). FE sells the turbines to companies that generate and supply electricity. FE also has maintenance contracts to service wind turbines and this provides 40% of FE's total revenue.

FE is based in country M and has operations in Europe, Asia and South America. FE operates four factories that manufacture the wind turbines. FE uses a carefully chosen group of suppliers of components and materials to ensure quality.

In 2017, FE entered the household market for wind turbines in Europe without much planning and did not make significant changes to its promotion strategy. For the household market FE manufactures small wind turbines that can be fitted on roofs or in gardens. These are manufactured in FE's European factory and sold through retailers.

A growing market

At the recent annual general meeting (AGM), Tuuli Saito, Chief Executive Officer (CEO) of FE, finished her speech to shareholders stating that: '55% of new electricity generating capacity in developed countries is from wind and this is increasing. Fujin Energy's commitment to delivering cost-effective energy solutions and quality products has seen our business grow. We are now the fourth largest manufacturer of wind turbines globally. Our focus on quality by controlling the manufacturing process is central to our success. Our strategic decisions will also continue to be guided by our commitment to deliver industry leading shareholder value.'

Production capacity

FE's sales volume of large wind turbines has been increasing annually at an average of 7%. FE's operations are now approaching full capacity. For example, in 2019 the South American factory was operating at 90% capacity. Tuuli is worried that FE will be unable to meet customer orders for 2021 on time. She has asked the factory's operations manager to consider how to respond to this problem. He favours outsourcing the production of the towers to CT, a company based in South America.

This outsourcing would release factory resources to allow FE to increase production of the completed wind turbines. The operations manager has had preliminary discussions with CT and they would be able to deliver towers within four months of signing a contract.

The alternative to outsourcing is to expand FE's factory in South America but this would take a year to complete. The current capacity of the factory is 450 wind turbines per year and forecast production for 2020 is 425 units. Table 1 provides selected data regarding the two options.

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Table 1: Selected data for the two ways of increasing capacity

	Factory expansion	Outsourcing
Capital cost ($m)	200	–
Increase in non-current liabilities ($m)	150	–
Additional annual capacity of wind turbines	225	150
Allocated fixed costs per tower at full capacity ($m)	0.02	–
Variable cost per tower ($m)	0.33	0.37
Average additional transport cost per tower ($m)	–	0.01

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Marketing

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Dan, the Marketing Director, was recently interviewed by industry magazine *Global Wind Power*. He credited FE's success to a combination of factors: 'Wind energy has become one of the most economically competitive forms of generating electricity. FE invests over $100m in research and development (R&D) to increase turbine efficiency. FE has also implemented an effective business-to-business model of marketing. This allows us to charge a price premium of 25% over our competitors. Traditional sources of electricity generation have also become more expensive due to carbon taxes and cost increases.'

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FE has sales offices in each region and has a significant presence at international trade fairs and exhibitions. Advertising is limited to specialist magazines. Trade promotions focus on providing finance deals to help businesses purchase the wind turbines. Dan believes that the FE brand has benefited from the ongoing sponsorship of a famous round-the-world sailing race.

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However, despite FE's reputation in the industry, sales of small wind turbines aimed at the household market have failed to meet targets.

The external environment

In country M, government subsidies have been paid to electricity companies that produce renewable energy, including wind power. Tuuli believes that these subsidies will end by 2022. This change in government policy is also occurring in many other countries in which FE operates.

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The Board of Directors is considering how to respond to increasing interest rates in many countries. FE's chief economist is predicting that interest rates will increase from 4% to 6% in country M within the next 12 months.

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Financial performance

Tuuli was appointed CEO in 2014 at a time when FE was struggling to increase market share and profits. She is part of a team including Finance Director, Marika Connor, that increased FE's profitability through cost cutting. Marika focuses on financial data to recommend decisions to the Board of Directors. She expects her finance managers to analyse data at an operational level to identify problems. Information on FE's financial performance is shown in Tables 2 and 3.

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[Turn over

Table 2: Extract from income statement (year ending 31 December 2019)

	$m
Revenue	4200
Cost of sales	3400
Expenses	400

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Table 3: Extract from statement of financial position (at 31 December 2019)

	$m
Non-current assets	1146
Inventories	2000
Trade receivables	1200
Overdraft	370
Trade payables	2211
Tax payables	20
Loans	800
Share capital	45
Retained earnings	900

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Skilled engineers needed

FE's employees are highly skilled in either the manufacture or servicing of wind turbines. In many countries there are skills shortages, so FE has to train employees, which takes three to five years, depending on their role. As FE's service contract business has expanded the workload of engineers has increased. Salaries for engineers have increased rapidly. Engineers work long hours to meet FE's service commitments. FE's labour turnover has increased in recent years.

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Strategic options

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Tuuli believes that FE needs to be a dynamic business adaptable to rapidly changing market conditions. She frequently suggests opportunities for FE. Following a thorough strategic analysis of the business, the Board of Directors has identified two strategic options for growth.

Option A: Build a new factory in country P. This would create hundreds of new jobs and give FE the potential to gain substantial market share in country P. The market is forecast to double in size by 2026.

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Option B: Takeover of a battery manufacturer. Southvolt manufactures lithium ion batteries. As wind power is unreliable, electricity storage is increasingly important to increase the reliability of the supply of renewable energy to meet customers' needs.

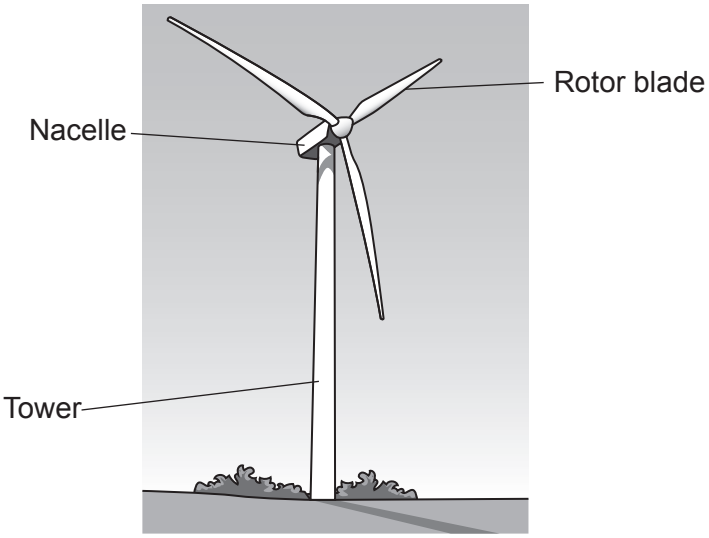
A project team has researched these options using strategic choice techniques and submitted a report to the Board of Directors. Extracts from the report are shown in Appendices 2 and 3.

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The Board of Directors is meeting next week to decide which option to approve. Based on the decision tree analysis, Tuuli has decided to recommend option A to the board.

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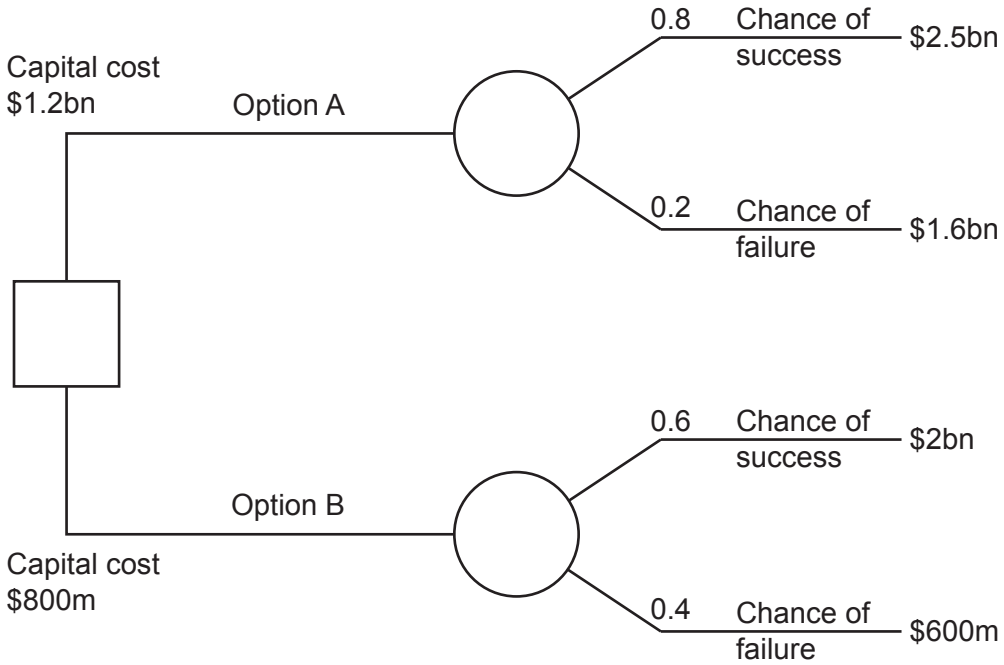
Appendix 1: The main features of a wind turbine



Appendix 2: Information for the two options

	Option A: New factory	Option B: Takeover
Estimated annual rate of return (ARR)	12%	8%
Key driving factor	Forecast growth in country P's renewable energy sector	Competitive advantage when bidding for electricity company contracts
Key constraining factor	Cost	R&D required to improve battery technology

Appendix 3: Decision tree for the two options



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