TPE 2023 – Case Study Part 1

Schuyler

History

TPE examination, May 2023. Pass rate 88.3%. 2½ hrs in the morning and 3 hrs in the afternoon.

Technical Content

FA 2021

BACKGROUND NOTES

It is a Tuesday morning in May 2023. You are Alex, a newly qualified chartered accountant, who is employed by Monticello Jefferson LLP (''MJ'), a large accountancy partnership. You are based in the London office. You have just started on a three-month secondment to Schuyler Renewables plc ('Schuyler') to help them with some projects. During the period of your secondment, you will report to the executive directors of Schuyler. However, you are still an employee of MJ during this time, and any concerns about your secondment should be raised with the MJ ethics partner.

It is your second day at Schuyler. You spent yesterday completing a short induction course learning a little bit about the company and meeting some key members of staff. This morning, you have a meeting with one of the directors, Xinyi Zhao. She has asked you to meet you in her office.

"Alex, welcome to Schuyler," says Xinyi as you enter her office. "We are delighted to have you with us for a few months. You come highly recommended from your firm. They said you were astute and analytical and a great problem solver which is just what we need.

"As you'll know from your induction yesterday, Schuyler generates renewable electricity from a number of onshore windfarms in the southeast of England. We have six operational sites currently, but we are always searching for other sites to grow our portfolio. The background information you received as part of your induction course (Section 1) should have given you a good overview of the business.

"I have been searching for potential new sites and I need your help to evaluate and compare the two sites identified. Please prepare a briefing paper for me and the other directors. I'd like you to recommend whether we should acquire one, both or neither of the sites. Members of the finance team are a little stretched just now and I thought this would be an ideal task for you to get started on. You should consider the non-financial and financial implications of the sites. When bringing a new site online, it is really important to keep the local community and politicians happy. I've pulled together the information that I think you'll need (Section 2).

"There is another matter that I thought you could also include in the briefing paper. I've just received a slightly worrying email from the external relations manager (Section 3). I'd like you to advise how you think we should deal with the issue that has been raised. Also, if you have any suggestions as to what we might do to avoid the repetition of this situation going forward that would be useful.

"We have an executive directors' meeting this afternoon, so I need you to pull this briefing paper together by lunchtime. You'd best get started right away. I've got another meeting to get to now." Xinyi gets up and heads towards the meeting room door.

Aware that you've not yet said a word, you quickly ask, "Would you like to see the paper before the meeting?".
Xinyi looks back, with a frown, and says, "I trust that you'll do a good job. You're daily secondment rate is really high. I wasn't convinced you'd be worth it, but my fellow director Jay has had prior experience with your firm and he said you'd do what we needed you to."

You are a little taken aback by the abrupt finish to the meeting but take away the information you've been given to get on with the task.

Required:

- Prepare the briefing paper for the directors' meeting that:
    - evaluates and compares the two potential windfarm sites; and
    - advises how to deal with the matter raised by the external relations manager and how to prevent the issue from happening again.
- Review all the information in preparation for the afternoon session.

SECTION 1

Extracts from Schuyler induction course material

History and background

Schuyler was formed in 2011 to build and operate windfarms in the UK to generate renewable electricity.

The company was founded by Naveed Abassi, Jay Reynolds and Xinyi Zhao who are directors and shareholders. Each of them owns 2 million ordinary shares. The remaining 4 million ordinary shares are owned by a number of financial institutions. Schuyler is not a listed company.

Naveed, Jay and Xinyi have been friends since university where they all studied engineering. Prior to founding Schuyler, they worked for different oil and gas companies and gained experience in project management. They all have a basic level of financial knowledge.

Naveed is the Chief Executive Officer ('CEO'), Jay is the Chief Operating Officer ('COO') and Xinyi is the Chief Development Officer ('CDO').

Information about the renewables energy industry

Renewable energy consists of energy from windfarms (onshore and offshore), solar panels, hydro-electric and non-coal biomass. It now makes up over 40% of the total electricity generation in the UK and this is expected to rise to around 50% by 2025.

Increasing the use of renewable energy is a critical part of meeting the goals of the Paris Agreement, the legally binding international treaty on climate change. The UK Government published a Ten Point Plan for a Green Industrial Revolution in November 2020 which includes a pledge to produce enough offshore wind power to power every home, quadrupling production capacity by 2030.

Onshore and offshore wind generation accounted for 14% and 15% of total electricity generation in Q1 2023. Windfarms generate cost-effective clean power. Although UK government subsidy for onshore wind has been gradually phased out since 2016, offshore wind farms have continued to benefit from the UK government's Contract for Difference ('CfD') regime. Since 2021, onshore wind is now receiving some limited subsidy under this regime as well, but the majority of the subsidy is reserved for offshore wind.

Under the CfD regime, renewable energy generators bid to receive a fixed price for the energy they produce for the duration of the contract. Each generator makes a sealed bid with details of their project, including their proposed "strike price". When market prices for selling the electricity generated fall below the strike price, the UK Government pays the difference. If the market price is higher than the strike price, then the generator pays the difference back to the UK Government. There is a set amount of funding, the bids are reviewed, and the allocation of funding is published.

Electricity generated by renewable sources or fossil fuels is transferred to a high-voltage electricity transmission network to eventually be distributed to consumers and businesses by utility companies. In England this transmission network is run by, and referred to as, the National Grid.

The market for the generation of renewable electricity is fairly fragmented. There are a few large energy companies, lots of smaller companies, such as Schuyler that have a number of different renewable sites, and then lots of small single-site generators, who are often generating mainly for their personal use.

The renewable energy industry in the UK is regulated by Ofgem. A generation license must be granted by Ofgem before a business generates electricity. Ofgem are responsible for monitoring all licence holders, who are required to comply with industry codes.

Strategy

The mission of Schuyler is to enable people to transition to a sustainable energy future by providing clean, renewable electricity.

Sustainability is key to all that Schuyler does. We strive to continuously improve the operational efficiency and the environmental performance of our windfarm sites. We are committed to the United Nations Sustainable Development Goals with particular focus on:

- Goal 7 - affordable and clean energy
- Goal 8 - decent work and economic growth
- Goal 13 - climate action

Schuyler is committed to working with the local community at all wind farm sites. As part of each windfarm project, Schuyler provides grants to the local community to fund local energy efficiency improvements. Community support like this is essential to receive planning permission from local government.

Schuyler windfarm sites

The first Schuyler windfarm site, named Seabury, was opened in 2012 on the Isle of Sheppey in Kent. Schuyler has continued to expand, adding new sites every two to three years and there are six operational sites around the south and east coast of England. A number of future sites have been identified and are being evaluated.

The number of turbines varies per site, all of the turbines currently used by Schuyler are Class 2 three-blade turbines which are able to generate around 2 megawatts (MW) at full capacity. Wind turbines are classified as Class 1 (heavy duty), Class 2 (medium duty) or Class 3 (low duty) but most onshore commercial turbines are Class 2. The potential capacity of each turbine depends on both the specification of the turbine installed and its geographical position, and so varies from site to site.

Site name	*Operational since*	*Number of turbines*	*Installed capacity (MW)*
Seabury	2012	2	4.00
Eacker	2014	4	8.20
Hercules	2015	3	6.00
Angelica	2018	3	6.30
Rochambeau	2019	5	10.25
Theodosia	2021	5	10.10
			44.85

Generally, the ideal location for a windfarm is on a flat hilltop, with no obstructions in the direction of the prevailing wind. Wooded or built-up areas create higher wind turbulence which leads to wind gusts and more wear and tear on the wind turbines.

Schuyler has purchased all turbines since 2015 from Lafayette SA based in France. Lafayette is an established turbine supplier, providing a range of onshore and offshore turbines which have some of the highest reliability statistics in the market.

Site installation is undertaken and managed by external contractors. Schuyler has always used a company based in Kent in the southwest of England for installation. A wind turbine tower is manufactured in parts which are assembled on site, but the turbine blades are single pieces. Due to the global effort to increase the proportion of renewable energy generation, there have been some shortages in supply for wind turbines, and this is expected to continue throughout 2023.

Schuyler has not benefitted from the UK Government Contract for Difference regime and there is no intention that they will.

Electricity generation

The amount of power generation depends on the position and size of each turbine. The blades of the turbines turn when the wind blows, which then generates electricity.

The amount of electricity generated depends on the wind speed, turbine blade length and air density. Air density is higher closer to sea level. The turbines start operating when the wind speed is 8 miles per hour (mph) and shut down when wind speeds exceed 55mph for safety reasons. Modern wind turbines produce electricity 70-80% of the time, but the amount of electricity generated depends on the wind speed. The prevailing wind direction in England is from the south-west, and the west coast of England generally has higher wind speeds than the east coast.

Research has shown that wind turbines generate around 28.1% of their theoretical maximum output over the course of a year, which is known as the ‘load factor’. Energy usage is usually measured in kilowatt hours (kWh). Average domestic household consumption is 3,578kWh.

A 2MW wind turbine can produce 4,923,120kWh which is calculated as:

28.1% load factor x 2,000kW capacity x 365 days x 24 hours

This is enough to power around 1,376 homes in a year.

The electricity produced by each Schuyler wind turbine is transferred to a sub-station on site, which then transfers, or exports, the electricity to the National Grid at the closest connection point.

Revenue and costs

Revenue is earned for every kWh exported to the National Grid.

UK Government subsidies for onshore wind have decreased in recent years, so the primary source of revenue is the wholesale energy market, with renewable energy generators selling electricity to utility companies who supply consumers.

The policy of Schuyler is to enter into a power purchase agreement ('PPA') with a utility company for each site which sets an agreed price per kWh exported to the National Grid. Schuyler earns an average of 6.5p per kWh from existing PPAs. Consumers are increasingly looking for energy tariffs which consist of 100% renewable electricity.

Operational and maintenance costs of wind turbines are, on average, 1.5p per kWh produced. These costs include insurance, maintenance and servicing costs.

Financial position

At 31 December 2022, Schuyler was financed by a mixture of equity and debt financing:

	£'000
Share capital (£1 shares)	10,000
Share premium	16,400
Retained earnings	18,560
	44,960
Bank loans - average interest rate 5%	53,356
Bonds	20,000
	73,356

Schuyler owns all of its wind turbines, and these have a net book value of £65,320,000. These turbines are valued at depreciated historic cost.

The cost of capital of Schuyler, which should be used as a discount factor where necessary is 12%.

Staffing

Schuyler employs 36 staff, including the three executive directors.

	Staff number	*Average annual salary*
Executive directors_____	3	£270,000
Windfarm maintenance___	12	£28,000
Site development_____	2	£45,000
Finance, legal and HR____	14	£42,000
Marketing and governance_	5	£28,000

Two staff are employed at each windfarm site to oversee operations and undertake general maintenance.

Two members of staff have left the finance department recently, the financial controller and a finance manager who was responsible for government and community grants.

The board consists of the three executive directors and three non-executive directors. The non-executive directors are each paid a salary of £8,000 per annum.

Community Grants

Schuyler is committed to working with the local community at each of its windfarm sites. Schuyler commits to providing annual community grant funding of £100,000 for each site, for the operational life of the site. The grant is used to fund local projects which meet the eligibility criteria:

- The project must be based in, and benefit, the local community
- Projects need to meet one or more of these priorities:
    - Community facilities and services, such as hall refurbishment or buying equipment and vehicles
    - Community or local events, such as country fairs or special events
    - Environmental projects, such as planting trees or building paths
    - Heritage projects, such as history trails or statue conservation
    - Skills and employment, such as training equipment
    - Sport and recreation, such as upgrading play areas or buying sports equipment
    - Youth and education, such as Scout and Guide clubs or nursery and school projects

Individual grants range from £10,000 - £50,000 and applications for funding are made by 30 June each year. Once the total annual community grant of £100,000 has been allocated at each site, the fund is closed for the year.

Funding applications are made to the finance manager, Joseph Brooklyn, via the Schuyler website. Joseph evaluates the bids each year and makes the grant allocations. Joseph provides a report for the Board each year with details of the projects that have been funded.

SECTION 2

Details of potential future windfarm investments

Alex,

The two sites that are being considered have been given the names Martha and Philips. Please evaluate and compare them and let me have your thoughts. Funds shouldn't be an issue as I'm sure we can borrow what we need if we don't have the cash.

Xinyi

Martha site

This site is situated in Devon in the south-west of England. It is a rural site, close to the coast, which is accessed by a single-track road. There are no residential properties within a four-mile radius, however there are two large dairy farms which would border the site. Schuyler has been in discussion with the landowner and has negotiated a 25-year lease for the site, at a cost of £40,000 per turbine per year. Conditions of the lease include the full restoration of the site at the end of the lease term, which it is estimated will cost £420,000. Discussions with the local council are at an advanced stage and planning permission appears likely. However, there have been some complaints lodged from local conservation groups, as the area is frequently used as a nesting site for some endangered sea birds.

It is proposed that 3 x 2.2MW turbines could be installed on site. Each turbine would cost £2.1 million including installation. The turbine blades are 52m and require specialist lorries to transport them. The turbines have an expected useful life of 25 years. The nearest National Grid connection is three miles from the site and additional high-voltage cabling will be required at an estimated cost of £140,000.

The load factor of these turbines is calculated as 34% due to the high average wind speed at this location. Initial discussions have taken place with a utility company and Schuyler estimate that a 25-year PPA at a price of 6.9p per kWh can be obtained.

Philips site

The Philips site that is being considered is near Norwich, on the east coast of England. There is a new build housing development one mile to the west of the site, but the site would not be visible due to the surrounding extensive woodland. The site is situated close to a main road and connection to the National Grid. Annual lease costs of £36,000 per turbine have been agreed and the turbines would need to be dismantled and removed at the end of the lease term at an estimated cost of £22,000 per turbine.

The proposal is to erect 5 x 1 MW turbines, as these turbines are considerably shorter than the 2+MW turbines that Schuyler usually uses at only 25m high. These 1MW turbines are manufactured by a newly-established local company, WindTurb Ltd. The blades on these turbines are 10m long. The estimated load factor at the site is 27.4%. The turbines cost £795,000 each to purchase and install including infrastructure and other costs. They have an estimated useful life of 20 years which is the lease term that has been agreed with the landowner. Operational and maintenance costs are 30% lower for the smaller turbines.

Initial discussions with a different utility company suggest that Schuyler would expect to receive 7p per kWh produced over the life of the site. Discussions with the local council are at an early stage and some councillors are not in favour of the development. However, I'm pretty sure that if Schuyler offers some funding to these tricky councillors, that we can get them onside.

SECTION 3

Email from the external relations manager

To: CDO@schuyler.com
From: externalrelations@schuyler.com
Date: 1 May 2023
Subject: Fwd: Grant fraud

Xinyi,

I've received the email below in relation to one of the community grants that Schuyler awarded in 2022. I have responded to Mr Ferdinand to let him know that we will investigate and have asked him to give us a week to look into this matter. The finance manager who deals with these grants, Joseph Brooklyn, has recently left Schuyler with no current replacement, so I had to do some investigation myself.

I found the spreadsheet that Joseph uses to show the grant allocations made on the server and I can see that £50,000 was awarded to the local library for an extension. There were a couple of smaller grants also awarded in 2022 relating to the Theodosia site.

I've checked the system for a list of grant applications made in the year ended June 2022 that relate to the Theodosia site. There were 6 applications made in total, including the application by Mr Ferdinand referenced below. Joseph has printed these out, as I found them in a file along with a few scribbled notes on each application. The notes on the Ferdinand application just said, "meets criteria, not funded" and I also found a copy of the standard response sent to Mr Ferdinand.

I looked at the library application and it was very short. Several sections of the application form had not been completed. The notes on the front just said, "maximum funding awarded". I checked with finance, and the £50,000 grant was transferred via BACS to Mia Harlem on 19 July 2022.

I phoned the library. Mia Harlem is no longer employed by the library and the person I spoke to told me that no building work had been carried out over the last year and they were not aware of any plans to extend. I have not been able to absolutely verify whether Joseph is related to the library manager. However, I did check his social media account, and Mia Harlem is one of his contacts and there are many pictures of them together, including family photos.

I felt that this matter was serious enough that I should make you aware of what I have found.

Dawn

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To: externalrelations@schuyler.com
From: jf45@pmail.com
Date: 29 April 2023
Subject: Grant fraud

To whom it may concern:

I live near to your Theodosia windfarm site. Your company awarded a grant of £50,000 to our local library in June 2022 to extend the building.

I applied to Schuyler at the same time for a grant to make my community enterprise business more energy efficient by installing solar panels and better insulation, but was unsuccessful, which was a huge disappointment. I initially accepted the decision, but I have now been made aware that the library manager, Mia Harlem, is the sister of the person in your organisation who awards the grants - an individual called Joseph Brooklyn.

The library building has not been extended and I suspect Mia Harlem and her brother have stolen the money. Clearly your organisation is totally corrupt, and I intend to take this to the local and national press.

Yours in disgust.

Mr Jude Ferdinand
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END OF PAPER