



# CHAPTER 14

## Green strategy and sustainability

### LEARNING OUTCOMES

When you have worked through this chapter, you will be able to:

- outline the main elements of green strategy and sustainability and explain their importance;
- define and explain the additional elements involved in analysing the green strategy environment;
- explain the strategy implications of resource-based green strategy;
- identify how the purpose of an organisation changes as it adopts green strategy principles;
- explain the main implications of green strategy for knowledge, technology and innovation;
- outline the impact on strategy options, strategy choice and implementation from the perspective of green strategy and sustainability.

### INTRODUCTION

**Definition ►** Green strategy concerns those activities of the organisation that are focused on both sustaining the earth's environment and developing the business opportunities that will arise from such additional activities. Sustainability is the underpinning principle.

We begin with an important point of clarification. In many books and papers, green strategy is called the 'environment' or the 'natural environment'.<sup>1</sup> However, the words 'strategic environment' have been used in a different and broader context throughout this text – for example in Chapter 3. To avoid any confusion, this chapter uses the words 'green strategy' rather than 'environment' for the specific topic of strategies related to sustainability.

This chapter summarises and brings together recent strategic thinking on green strategy with sustainability being the key underpinning logic in all its aspects. Significant academic work has

been undertaken in this area,<sup>2</sup> and this chapter draws on that material. It covers both strategic management and other fields of business such as corporate social responsibility, marketing, accounting and finance and production. However, the studies have focused primarily on ensuring that businesses meet or exceed sustainability *standards*. There has been rather more limited work on exploring the strategic business *opportunities* that might arise from such activities: for example, new industries developing solar power or wind energy. The main topics of green strategy broadly follow the sections of this chapter – see Figure 14.1.

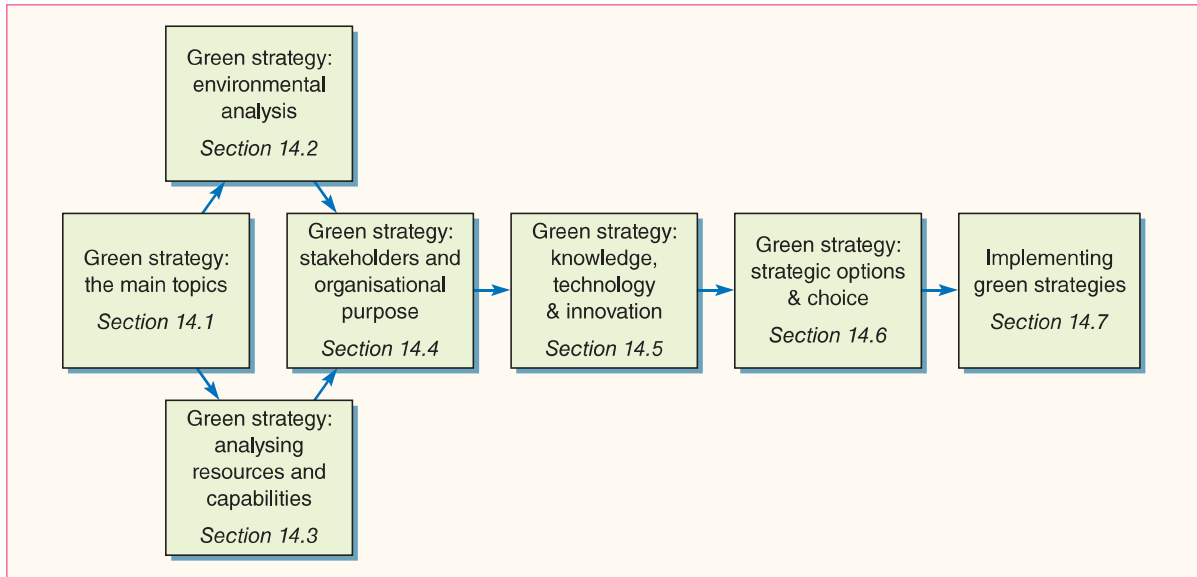


FIGURE 14.1 The main topics of green strategy

## CASE STUDY 14.1

### Prescriptive and emergent strategies: profits from the sun, wind and sea? Even from nuclear energy?

**With the drive towards renewable energy, companies worldwide are beginning to commercialise the earth's natural resources. But profits are still to emerge in some cases. And major difficulties remain, as this case explains.**

In terms of their contribution to total energy around the world, renewables accounted for only 33% of total energy consumption in 2019.<sup>3</sup> Although this had risen from 24% in

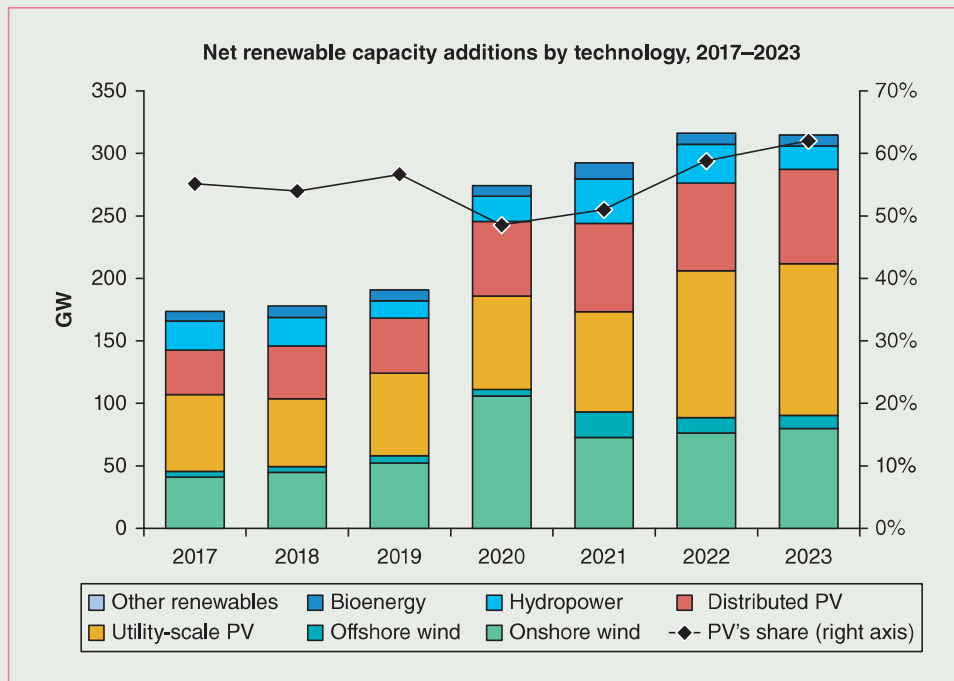
1973, fossil fuels such as coal, oil and gas were still easily the largest energy source. However, virtually every government around the world was convinced that this source needed to be radically reduced by 2050. In essence, the problem with all alternative forms of renewable energy at the present time is that the costs of production are higher than those for fossil fuel. There are two implications:

(Continued)

- Fossil fuels will continue to be the main source of energy until the costs of alternatives are reduced, for example by further advances in technology. The other possibility is that the cost of fossil fuel is raised, for example by extra government taxes on such fuel or by external factors such as war.
- There is a strong incentive to invest in new technologies to drive down the costs of renewable energy

sources like the sun and the tide. But this pressure is, at least partly, driven by government policy rather than commercial considerations. Typically, public policy decisions are slower and lack the clearer sense of direction possessed by some business decisions. Figure 14.2 shows how new areas are emerging.

For the purpose of this case, we focus on four methods of reduction: solar, wind, tidal and nuclear power.



**FIGURE 14.2** Solar power and Onshore Wind provided the main renewable resources in 2023

Note: 'PV' means photo-voltaic devices that convert sunlight into electrical energy. 'Utility-scale PV's are *fields* of solar panels, rather than smaller, individual installations.

Source: International Energy Agency 2022. Reprinted with permission.

### Profits from solar power

This technology has existed for many years and is relatively mature. Consequently, many companies are now investing in this form of renewable energy – both as manufacturers and as users. Importantly, the technology is so mature that large-scale production of solar panels is

now being undertaken, especially in China and the USA. Economies of scale will bring down the production costs, bringing them closer to the costs of fossil fuels. One of the technical problems for solar power is that the more northern countries receive lower amounts of sunlight, especially during the winter months. Hence, there is some incentive to develop other forms of renewable energy.

### Profits from the wind

Many countries around the world now have both on-shore and off-shore 'windfarms' – essentially, groups of windmills that turn to generate power. The technology is partially developed, especially for land-based windmills. But the costs are still higher than for fossil fuels and there is a technical problem with wind: its speed can be either too low to generate electricity or too high so that there is risk of damage. Nevertheless, windfarms are in operation with many more planned. For example, the UK has set out extensive plans for licensing areas of the land and sea for this purpose. There is an additional problem with wind farms: their visual and environmental impact may be so great that there are sometimes local planning objections – see Case study 14.2 on *Viking Energy*.

### Profits from the sea

Tidal energy generation is still in the experimental testing stage. Companies with government support are now working to test turbines that are lowered into the sea and, as the tide rises and falls, generate energy. Turbines for tidal energy need to be sited where sea levels rise and fall dramatically: some geographical locations, such as northern Scotland, are particularly well suited to this. Technology and profits from this source of renewable energy have scope but are yet to emerge clearly. However, the first working tidal energy turbines began generating electricity in the tidal surge of Bluemull Sound, northern Shetland, in 2022.

### Profits from nuclear power

Civil nuclear power generation has now been around for over 50 years. Some of the early reactors, such as Chernobyl, were so badly designed and managed that they have given the industry a poor reputation. Some nuclear reactors have also been poorly sited, like those at Fukushima, Japan, on

the coast near a major geophysical fault line. Thus, there are risks in nuclear power that the industry has not always recognised. Some people regard those risks as being so great that they oppose any further nuclear development. They also argue that there is a major problem over the storage of spent nuclear fuel which will hold its dangerous radioactivity for hundreds of years. However, the nuclear industry has developed new designs that have reduced these risks and there are zero carbon emissions from nuclear energy plants. On balance, some – but not all – governments favour more nuclear investment over the next 20 years. Hence, nuclear power will generate profitable business.

From the above brief descriptions, it will be evident that there are risks and opportunities in all the areas of development. This case has deliberately left it to the reader to make judgements on whether particular forms of renewable energy are beneficial and cost-effective to the world.

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### Case questions

- 1 Which of the above four forms of renewable energy are predominantly prescriptive and which are emergent? Why?
- 2 Which of the four areas has the greatest strategic risk? What underpinning strategy principles might be used to lower any such risks? Consider, for example, the implications of the product life cycle, first mover advantages, joint ventures and alliances.
- 3 Are commercial considerations, like profitability, the most important factor in deciding the investment and use of alternative forms of renewable energy? Or should governments intervene to support investment in some areas in any circumstances? And, if government action is appropriate, should this be undertaken regardless of the cost?

## 14.1 GREEN STRATEGY AND SUSTAINABILITY: THE MAIN TOPICS

In a major survey of 400 chief executives around the world in 2022,<sup>5</sup> researchers found that senior managers placed sustainability as eighth in their top strategic priorities. Environmental sustainability was cited as the third largest driver, just behind functional performance and general quality in developing new product areas. In other words, green strategy delivers positive results for leading companies.