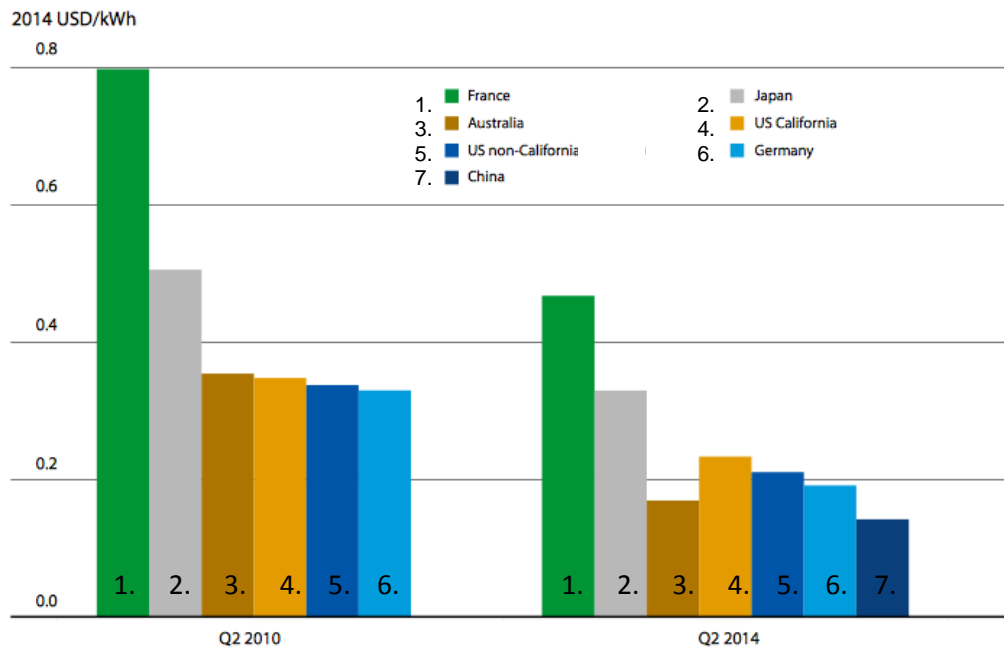


**A. Writing** (12 points)

Describe and interpret/comment on the graph (Figure 1). (200-250 words)

Figure 1: Cost of electricity of residential solar photovoltaic systems by country, 2010 to 2014



Sources: IRENA Renewable Cost Database; BSW, 2014; CPUC, 2014; GSE, 2014; LBNL, 2014; and Photon Consulting, 2014.

USD = US dollars; kWh = kilowatt hour (1 kilowatt of power sustained for 1 hour); 1. France; 2. Japan; 3. Australia; 4. US California; 5. US non-California; 6. Germany; 7. China.

Source: <http://reneweconomy.com.au/graph-of-the-day-the-plunging-cost-of-renewables-49704/>

Your text will be marked on content, discourse organisation, range and appropriacy of vocabulary and structures, and grammatical accuracy.

**B. Reading** (6 points)

Read the text on p 2 and answer the questions that follow.

## Winners and losers in the age of energy abundance

American shale has shifted the market but not solved as many problems as it should.

Nick Butler

1. In economic terms, the US has been the clear winner from the dramatic changes in the global energy market over the past decade. Shale gas and tight oil produced from shale rocks have driven up production and reduced the need for imports. Some 1.7m jobs have been created as a result and, along with the reduction in energy costs, **that** has contributed to steady economic growth since the crash of 2008.
5. Shale developments in the country have helped to produce a fundamental shift in the world market — instead of being scarce, and ever more costly, energy is plentiful and prices have fallen. The only remaining question is whether the shift to an “age of abundance” is changing the global political landscape as well.
10. **That** is the theme of a new book by Professor Meghan O’Sullivan, who works at the Belfer Center in Harvard. Ms O’Sullivan is an optimist. **She** sees in “abundance” the chance for significant positive changes in the balance of power around the world, all of which would support the foreign policy objectives of the US government. In the absence of scarcity there should be no scope for energy exporters such as Russia to use supplies of oil or gas as a tool to threaten adversaries. Europe will be able to diversify
15. **its** sources of supply and avoid over dependence on Russian gas. Low prices should encourage sensible reform in countries currently dependent on oil and gas revenues, such as the Gulf states. China should be able to access the resources it needs without exploiting and compounding the weaknesses of particular producing states. The US itself could develop a much closer North American energy community, including Canada and Mexico. Lower costs for renewables should support collective action to
20. combat the risks of climate change.
25. The book has a single word title: “Windfall”. Such optimism is admirable, but unfortunately the actual outcomes fall some way short of the aspirations. Russia continues to press ahead with the development of Nordstream 2, which will entrench Europe’s dependence and allow Moscow to isolate Ukraine. Although Kuwait and Abu Dhabi have developed relatively modern economies, none of the Gulf states have escaped from reliance on oil revenues. Chinese engagement, driven by the desire to secure energy supplies from countries such as Venezuela has served to extend autocratic and destructive regimes. Overall, the international impact of lower energy prices has been a transfer of wealth to consumers from producers — many of whom are facing growing debts as expenditure continues to exceed income.
30. The sudden loss of revenue risks creating failing states in areas vulnerable to Muslim fundamentalism. Within **the industry** the age of abundance has shifted the focus of competition towards a fight for market share, but the results can be just as destabilising as the previous sense of scarcity. One of the reasons why Ms O’Sullivan’s optimism has been misplaced is that the US response to abundance has been to draw
35. back from engagement. Energy independence is not complete — the US still needs net imports of around 5m barrels of oil each day — but the direction of change is clear and has been reinforced in the last few days by the publication by the Energy Information Administration of an authoritative forecast suggesting that thanks to the continuing surge in the production of shale oil total US output will rise to over 11m barrels a day by the end of this year.

Financial times 26 February 2018

**Name:** .....

**Number:**.....

**B. Reading (cont.)**

Based on the information in the text, say whether each statement is true (T) or false (F). Write your answers in the boxes. (0.5 points each correct answer)

1. The purpose of the article is to discuss the validity of the ideas of a book.
2. The shale gas and tight oil industry in the US has led to job growth.
3. The international petroleum and gas market is more competitive than it was 10 years ago.
4. China has supported autocratic regimes because it wants to export their oil.
5. Energy importers have increased their debt because energy prices are higher.
6. Professor Meghan O’Sullivan believes that the US oil production will influence other oil exporters’ political decisions positively.
7. The US is no longer dependent on oil imports for their energy needs.
8. Nick Butler agrees with Meghan O’ Sullivan.

**Reference, substitution and ellipsis (0.4 points each)**

What does each item (highlighted in the text) refer to? Write your answers here.

9. that (line 4)
10. That (line 9)
11. She (line 10)
12. its (line 14)
13. the industry (line 31)

**C. Vocabulary** (2 points)

The following sentences were taken from *The Guardian*. Complete each sentence with the appropriate term. You may need to add a preposition or conjugate a verb. The first letter of the term and a paraphrase of its meaning are given to help you. All letters are in lower case. Write the answers below. (0.4 points each)

1. Renewable energy infrastructure will generate greater **d.....** commodities. (willingness to consume)
2. The Cboe Vix index of implied equity volatility briefly **s.....** above 50 last week. (rose suddenly then fell suddenly)
3. BHP's \$20bn bet on US shale oil and gas six years ago turned the company into a top-10 producer in the country, but the oil market **d.....** that followed led to billions of dollars of impairments and write. ([period of] negative economic growth for a minimum of 2 quarters)
4. Eni said that Zohr was now producing 400m standard cubic feet of gas per day, but would ramp up before **r..... p.....** in 2019. (levelling off)
5. Lufthansa expects profits this year to be **s.....** below the record results it achieved in 2017, as revenues stabilise and further cost reductions are offset by higher fuel costs. (a little)

1. ....
2. ....
3. ....
4. ....
5. ....

## Answers

### A. Writing

A good answer will describe note the general trend and give examples. It will also suggest reasons for the change. The paragraph will be clearly organised with appropriate language. For example descriptive lexis includes verbs such as *drop*, *decrease*, *fall*, *slump*, as well as their nominal forms. The register will be impersonal. It will avoid explicit authorial intervention (e.g. we can see), and instead use more complex nominal groups as Theme (e.g. The significant fall in the cost of electricity produced by solar panels).

Content should include:

- General decreasing trend
- Significant drop for all countries
- China has entered the renewables market
- Trend shows increase in commitment to using greener energies
- Result of research & development

### B. Reading

1. True
2. True
3. False
4. False
5. False
6. True
7. False
8. False
9. the creation of 1.7m jobs
10. whether the shift to an “age of abundance” is changing the global political landscape.
11. Ms O’Sullivan
12. Europe’s
13. the oil industry

### C. Vocabulary

1. demand for
2. spiked
3. downturn
4. reaching a plateau
5. slightly