English for Academic Purposes (EAP) – Reading and Writing
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Exercise 1

a) Read the notes below on the emerging use of biomass material.

1. Changing oil to biomass not easy – needs change in public attitude
2. Energy infrastructure centred on fossil fuel
3. Oil supply chains well established
4. Biomass use/supply chains not developed
5. Biomass problems: smoke/smell
6. Biomass difficult to use outside industry – specialist equipment needed
7. Biomass releases CO_2 into the atmosphere – effect carbon neutral – gas taken up earlier by plants
8. Burning organic material now more cost-effective – but downside
9. Wood pellets for heating now cheaper than heating oil or liquefied petroleum gases in the UK
10. Ethanol now cheaper than petrol
11. Burning biomass reduces greenhouse gas emissions by more than 90%
12. Biomass – various forms
13. Farming crops for fuel – next big change in agriculture
14. Hydrogen fuel cell buses piloted in London
15. Power stations experimenting with biomass plus fossil fuels
16. Ethanol easy biomass to use – added to petrol and used in cars
17. Ethanol fermented from plants high in sugar
18. Other forms of biomass: cow-dung, chicken litter and bedding, olive oil cake, methane from agricultural waste

b) Read the draft below explaining the emerging market in burning organic material, biomass, to produce energy, and set out some of the advantages and disadvantages.

c) Match the notes with the text. Underline the relevant text and write the corresponding number.

Some people say that the need for alternative sources of energy will change agriculture in the United Kingdom like coal did during the industrial revolution. Farmers are turning production away from food to growing crops that can produce biomass energy. Biomass has a variety of forms, and the two important ones are woody material like willow and miscanthus, which grow fast and can be easily burnt, and oil like sunflower oil, soy and palm oil, which has a high calorific value when burnt. An instance is ethanol, which can easily be fermented from grain or sugar and can be mixed with petrol in the ratio of one part ethanol and nine parts petrol. Also, ethanol doesn't need the vehicle to be changed when it is used in cars. Other forms of biomass are cow-dung, chicken litter and bedding, olive oil cake and methane from agricultural waste like manure, used cooking oil wood and pellets, which are now proving cheaper energy alternatives.

Although using biomass has many benefits, there are several major arguments against using fuel produced from biomass. The main one is that both the transport system and the whole energy infrastructure are organized around the use of fossil fuel. And, biomass oils like palm oil and wood from biomass materials can cause unpleasant smells and smoke. Bio-fuels can be difficult to use outside industry, as the supply of biomass and development of the necessary specialist equipment are in their infancy. And a shift in people's perception is required if using biomass is to take off.

However, the pressure from fuel shortages and cost can only exercise the minds of companies and encourage them to look for alternative energy sources. This is already happening as car companies increase the production of hybrid cars which run on a combination of oil and ethanol, fuel cell buses for urban transport and power stations mixing biomass like wood pellets with fossil fuels to produce energy. Some companies are already burning rubbish to produce energy and using methane, or so called landfill gas, from rubbish sites. So, the revolution has already commenced.

Exercise 2

a) Re-draft the text in bold below in your own words.
b) Re-draft the text using the items in the list below.

[1] **Some people say that** the need for alternative sources of energy [2] **will change** agriculture in the United Kingdom [3] **like coal did** during the industrial revolution. Farmers are turning production away from food to growing crops [4] **that can produce** biomass energy. Biomass has a variety of forms, [5] **and the two important ones** are woody material like willow and miscanthus, which grow fast and can be easily burnt, and oil like sunflower oil, soy and palm oil, which has a high calorific value when burnt. [6] **An instance** is ethanol, which can easily be fermented from grain or sugar and can be mixed with petrol in the ratio of one part ethanol and nine parts petrol. [7] **Also**, ethanol [8] **doesn't need the vehicle to be changed** when it is used in cars. Other forms of biomass are cow-dung, chicken litter and bedding, olive oil cake and methane from agricultural waste like manure, used cooking oil wood pellets, [9] **which** are now proving cheaper energy alternatives.

[10] **Although using biomass has many benefits**, there are several major arguments against using fuel produced from biomass. [11] **The main one is that** both the transport system and the whole energy infrastructure are organized around the use of fossil fuel. [12] **And**, biomass oils like palm oil and wood from biomass materials can cause unpleasant smells and smoke. Bio-fuels can be difficult to use outside industry, as the supply of biomass and development of the necessary specialist equipment are in their infancy. [13] **And** a shift in people's perception is required if using biomass is to take off.

However, the pressure from fuel shortages and cost can only exercise the minds of companies and encourage them to look for alternative energy sources. [14] **This** is already happening [15] **as car companies increase the production** of hybrid cars which run on a combination of oil and ethanol, fuel cell buses for urban transport and power stations mixing biomass like wood pellets with fossil fuels to produce energy. Some companies are already burning rubbish to produce energy and using methane, or so called landfill gas, from rubbish sites. So, the revolution has already commenced.

Redrafting items

a. foremost among these is the fact that
b. In spite of the obvious advantages to the environment of burning organic material to produce energy,
c. moreover
d. with car manufacturers now increasing the production of or introducing
e. an added problem is that
f. all of which
g. has the distinct of advantage of not requiring vehicle modification
h. that can be easily harvested to provide
i. is the driving force behind a revolution, which is about to transform
k. further

l. It has been said that

m. there are signs that this

n. another good example is

o. in much the same way as coal did

p. of which the two main sources

Exercise 3

In the text below some words and phrases have been covered. Reconstruct the text.

It has been said that the need for alternative source[s] of energy is the driving force behind a re[vo]lution, which is [se]t to transform agricu[lture] in the United Kingdom in much th[e] way as coal d[id] ing the industri[al] revo[lution]. Farmers are turning produ[cts] y from food to[p]ing crops [that] t can be [ha]rvested to provide biomass ene[rgy]. Biomass has a [va]riety of fo[rms], of which the [two] main s[our]ces are woody mate[rials] ke willow and miscanthus, [whi]ch grow fast and can [be] sily burnt, and oil like [sun]flower oil, soy and pal[m] has a high calori[fic] alue when burnt. Another good example is ethanol [which] ily be ferme[nted] in or sugar and can be mixed with petrol i[n a] ratio of one part ethan[ol] parts petrol. Further, ethanol has the distinct advantage of not re[quir]ing vehicle modificati[on] t is used in cars. Other forms of biomass are cow-dung, chicken litter and b[agasse], olive oil [and] methane from agricultural waste like manure, used cool[ing] oil wood pe[llets] of which are now proving cheaper energy alternatives.

In spite [of] the obviou[s advantages] the environment of burning organic material to produce [e]rgy, there [are] ajor arguments against usi[ng] roduced from bio[mass]. Foremost among th[em] is the fact that both the transp[ort] ystem and the whole [energy] infrastructur[e] ed around the use [of] oreover, bio[fuels] ke palm oi[l] om organic materials can cau[se] easant sm[ells]. Bio-fue[ls] an [also] be dif[ficult] use outside ind[ustry] s the su[pply] of biomass and deve[lopment] of the n[ecess]ary specialist equipment are in th[eir] nfancy. An adde[d problem] is that a shift in [the] ple's perception is required if using biomass is to take off.

However, the pr[essure] sure from fuel shortages and cost can only exercise [the] minds of companies an[d] encourage them to look for alte[rnative] e energy sourc[es]. There are signs that [this] is already happening [with] nufacturers now [are] ing the producti[on] r producing hybrid cars w[hich] a combination [of] oil and ethanol [or] es for urban transp[ort]. Petrol stations mixing biomass like wood pe[llets] fossil fuels to produce en[ergy]. Some companies are already burning ru[bber] n to produce energy [and] e, or so called landfill gas, from rubbish [dumps]. The revolution has already commenced.

Exercise 4

Look at the paragraph below. You can see that parts of the text are crossed out. Which other parts of the text can you remove to create a brief summary of the paragraph? Compare your answer with the key.

~~It has been said~~ ~~that~~ the need for alternative ~~sources of~~ energy is ~~the driving force~~ behind a revolution, which is about to transform agriculture in the United Kingdom ~~in much the same way~~ as coal did during the industrial revolution. Farmers are turning ~~production away from food~~ to ~~growing~~ crops ~~that can be easily harvested~~ to provide biomass energy. Biomass has a variety of forms, of which the two main sources are; woody material like willow and miscanthus, which grow fast and can be easily burnt, and oil like sunflower oil, soy and palm oil, which has a high calorific value when burnt. Another good example is ethanol, which can easily be fermented from grain or sugar and can be mixed with petrol in the ratio of one part ethanol and nine parts petrol. Further, ethanol has the distinct of advantage of not requiring vehicle modification when it is used in cars. Other forms of biomass are cow-dung, chicken litter and bedding, olive oil cake and methane from agricultural waste like manure, used cooking oil wood pellets, all of which are now proving cheaper energy alternatives.

Exercise 5

You can see that you can understand the general gist of the text in Exercise 4, even when parts of the text have been removed. Look at the two paragraphs below and cross out the text to create a summary.

In spite of the obvious advantages to the environment of burning organic material to produce energy, there are several major arguments against using fuel produced from biomass. Foremost among these is the fact that both the transport system and the whole energy infrastructure are organised around the use of fossil fuel. Moreover, biomass oils like palm oil and wood from organic materials can cause unpleasant smells and smoke. Bio-fuels can also be difficult to use outside industry, as the supply of biomass and development of the necessary specialist equipment are in their infancy. An added problem is that a shift in people's perception is required if using biomass is to take off.

However, the pressure from fuel shortages and cost can only exercise the minds of companies and encourage them to look for alternative energy sources. There are signs that this is already happening with car manufacturers now increasing the production of or introducing hybrid cars which run on a combination of oil and ethanol, fuel cell buses for urban transport and power stations mixing biomass like wood pellets with fossil fuels to produce energy. Some companies are already burning rubbish to produce energy and using methane, or so called landfill gas, from rubbish sites. So, the revolution has already commenced.

Exercise 6

Part of re-drafting a text is checking for mistakes. Use the codes below to help you find errors in the text.

Active/ Passive	– A/P	word order	– Wo
Articles	– A	wrong word	– Ww
Spelling	– Sp	Punctuation	– W
Grammar	– Gr	Singular/Plural	– S/Pl
Tenses	– T		

Look at the text below and correct the text using the notes to help you.

It has been said that the need for alternativ sources of	Sp
energy is the driving force behind a revolution, is about to	Ww
transform agriculture in united kingdom in much the	A and Sp
same way as coal did during the industrial revolution.	
Farmer are turning production away from food to	S/Pl
growing crop that can be easily harvested to provide	S/Pl
biomass energy. Biomass has a vareity of forms, of which	Sp
the two main sourse are; woody material like willow and	Sp and S/Pl
miscanthus, which grows fast and can be easily burnt and	S/Pl
oil like sunflower oil, soy and palm oil, which have a	S/Pl
high calorific value when burnt. Another good example is	
ethanol, which can easily be fermented from grain or	
sugar and can mix with petrol in the ratio of one part	A/P
ethanol and nine parts petrol. Further, ethanol has the	
distinct advantage of not requiring vehicle modification	
when it is used in car. Other forms of biomass are cow-	S/Pl
dung, chicken litter and bedding, olive oil cake and	
methane from aggricultural waste like manure, used	Sp
cooking oil wood pellets, all of which are now proving	
cheaper energy alternative.	S/Pl

Exercise 7

In the two paragraphs below, there are parts of the text that are irrelevant. Can you find them?

In spite of the obvious advantages to the environment of burning organic material to produce energy, there are several major arguments against using fuel produced from biomass. This is much more environmentally friendly than nuclear power, which, I feel, is dangerous for all of us. Foremost among these is the fact that both the transport system and the whole energy infrastructure are organized around the use of fossil fuel. Moreover, biomass oils like palm oil and wood from organic materials can cause unpleasant smells and smoke, which can lower the value of private property significantly. Bio-fuels can also be difficult to use outside industry, as the supply of biomass and development of the necessary specialist equipment are in their infancy. An added problem is that a shift in people's perception is required if using biomass is to take off. It takes people a long time to get used to new things in their diet.

However, the pressure from fuel shortages and cost can only exercise the minds of companies and encourage them to look for alternative organic energy sources. The future looks as if it is going to be much more pleasant than people originally thought. There are signs that this is already happening with car manufacturers now increasing the production of or introducing hybrid cars which run on a combination of oil and ethanol, fuel cell buses for urban transport and power stations mixing biomass like wood pellets with fossil fuels to produce energy. As a result, car production has increased worldwide. Some companies are already burning rubbish to produce energy and using methane, or so called landfill gas, from rubbish sites. So, the revolution has already commenced. Agriculture has changed significantly in recent in the past few decades.

Exercise 8

In the text below, the verbs have been removed. Complete the text by adding appropriate verbs and putting them into the correct tense. The first one has been done for you as an example.

Example: [1] has been said

It [1]_____ that the need for alternative sources of energy [2]_____ the driving force behind a revolution, which [3]_____ about to transform agriculture in the United Kingdom in much the same way as coal [4]_____ during the industrial revolution. Farmers [5]_____ production away from food to growing crops that can be easily harvested to provide biomass energy. Biomass [6]_____ a variety of forms, of which the two main sources [7]_____ woody material like willow and miscanthus, which grow fast and can be easily burnt, and oil like sunflower oil, soy and palm oil, which [8]_____ a high calorific value when burnt. Another good example [9]_____ ethanol, which can easily be fermented from grain or sugar and can be

mixed with petrol in the ratio of one part ethanol and nine parts petrol. Further, ethanol [10]_____ the distinct advantage of not requiring vehicle modification when it [11]_____ in cars. Other forms of biomass [12]_____ cow-dung, chicken litter and bedding, olive oil cake and methane from agricultural waste like manure, used cooking oil wood pellets, all of which are now proving cheaper energy alternatives.

Exercise 9

Put the jumbled texts 1–11 into the correct order.

1. sources of energy is the driving force behind a revolution, which

2. mixed with petrol in the ratio of one part ethanol and nine parts petrol. Further, ethanol has the distinct of advantage of not requiring

3. vehicle modification when it is used in cars. Other forms of biomass are cow-dung, chicken litter and bedding, olive oil cake and methane from

4. is about to transform agriculture in the United Kingdom in much the same

5. willow and miscanthus, which grow fast and can be easily burnt, and oil like sunflower oil, soy and palm oil, which

6. harvested to provide biomass energy. Biomass has a variety of forms, of which the two main sources are woody material like

7. way as coal did during the industrial revolution. Farmers are

8. agricultural waste like manure, used cooking oil wood pellets, all of which are now proving cheaper energy alternatives.

9. turning production away from food to growing crops that can be easily

10. has a high calorific value when burnt. Another good example is ethanol, which can easily be fermented from grain or sugar and can be

11. It has been said that the need for alternative

Key

Exercise 1

All of the points are mentioned except: 3, 4, 7, 8, 9, 10, 11. Part of 3 and 4 are used.

Exercise 2

It has been said that the need for alternative sources of energy **is the driving force behind a revolution, which is about to transform** agriculture in the United Kingdom **in much the same way as coal** did during the industrial revolution. Farmers are turning production away from food to growing crops **that can be easily harvested to provide** biomass energy. Biomass has a variety of forms, **of which the two main sources** are woody material like willow and miscanthus, which grow fast and can be easily burnt, and oil like sunflower oil, soy and palm oil, which has a high calorific value when burnt. **Another good example is** ethanol, which can easily be fermented from grain or sugar and can be mixed with petrol in the ratio of one part ethanol and nine parts petrol. **Further**, ethanol **has the distinct of advantage of not requiring vehicle modification** when it is used in cars. Other forms of biomass are cow-dung, chicken litter and bedding, olive oil cake and methane from agricultural waste like manure, used cooking oil wood pellets, **all of which** are now proving cheaper energy alternatives.

In spite of the obvious advantages to the environment of burning organic material to produce energy, there are several major arguments against using fuel produced from biomass. **Foremost among these is the fact that** both the transport system and the whole energy infrastructure are organised around the use of fossil fuel. **Moreover**, biomass oils like palm oil and wood from organic materials can cause unpleasant smells and smoke. Bio-fuels can also be difficult to use outside industry, as the supply of biomass and development of the necessary specialist equipment are in their infancy. **An added problem is that** a shift in people's perception is required if using biomass is to take off.

However, the pressure from fuel shortages and cost can only exercise the minds of companies and encourage them to look for alternative energy sources. **There are signs that this** is already happening **with car manufacturers now increasing the production of or introducing** hybrid cars which run on a combination of oil and ethanol, fuel cell buses for urban transport and power stations mixing biomass like wood pellets with fossil fuels to produce energy. Some companies are already burning rubbish to produce energy and using methane, or so called landfill gas, from rubbish sites. So, the revolution has already commenced.

Exercise 3

See the text in Exercise 2.

Exercise 4

~~It has been said~~ ~~that~~ the need for alternative ~~sources of~~ energy is ~~the driving force~~ behind a revolution, which is about to transform agriculture in the United Kingdom ~~in much the same way~~ as coal did during the industrial revolution. Farmers are turning ~~production away from food~~ to ~~growing~~ crops ~~that can be easily harvested~~ to provide biomass energy. Biomass has a variety of forms, ~~of which the two main sources are~~ woody material ~~like willow and miscanthus, which grow fast and can be easily burnt,~~ and oil ~~like sunflower oil, soy and palm oil,~~ which has a high calorific value ~~when burnt~~. ~~Another good example is~~ ethanol, ~~which~~ can easily be fermented from grain or sugar and can be mixed with petrol ~~in the ratio of one part ethanol and nine parts petrol~~. ~~Further,~~ ethanol

has the ~~distinct~~ of advantage of not requiring vehicle modification ~~when it is used in cars~~. Other forms of biomass are cow-dung, chicken litter and bedding, ~~olive oil cake and methane from agricultural waste like manure, used cooking oil, wood pellets, all of which are now proving cheaper energy alternatives.~~

Exercise 5

~~In spite of the obvious advantages to the environment of burning organic material to produce energy,~~ there are several major arguments against using fuel produced from biomass. ~~Foremost among these is the fact that~~ both the transport system and the whole energy infrastructure are organised around the use of fossil fuel. ~~Moreover,~~ biomass oils ~~like palm oil~~ and wood ~~from organic materials~~ can cause unpleasant smells and smoke. Bio-fuels can ~~also~~ be difficult to use outside industry, ~~as the supply of biomass and development of the necessary specialist equipment are in their infancy.~~ An ~~added~~ problem is that a shift in ~~people's~~ perception is required if using biomass is to take off.

~~However,~~ ~~the pressure from~~ fuel shortages and cost can ~~only exercise the minds of companies and~~ encourage ~~them to look for~~ alternative energy sources. ~~There are signs that~~ this is ~~already~~ happening with car manufacturers ~~now~~ increasing the production of or introducing hybrid cars ~~which run on a combination of oil and ethanol,~~ fuel cell buses for urban transport and power stations mixing biomass ~~like wood pellets~~ with fossil fuels to produce energy. Some companies are ~~already~~ burning rubbish to produce energy and using methane, or so called landfill gas, from rubbish sites. ~~So,~~ the revolution has already commenced.

Exercise 6

See Exercise 2.

Exercise 7

In spite of the obvious advantages to the environment of burning organic material to produce energy, there are several major arguments against using fuel produced from biomass. **This is much more environmentally friendly than nuclear power, which, I feel, is dangerous for all of us.** Foremost among these is the fact that both the transport system and the whole energy infrastructure are organised around the use of fossil fuel. Moreover, biomass oils like palm oil and wood from organic materials can cause unpleasant smells and smoke**, which can lower the value of private property significantly**. Bio-fuels can also be difficult to use outside industry, as the supply of biomass and development of the necessary specialist equipment are in their infancy. An added problem is that a shift in people's perception is required if using biomass is to take off. **It takes people a long time to get used to new things in their diet.**

However, the pressure from fuel shortages and cost can only exercise the minds of companies and encourage them to look for alternative organic energy sources. **The future looks as if it I going to be much more pleasant than people originally thought.** There are signs that this is already happening with car manufacturers now increasing the production or introducing hybrid cars which run on a combination of oil and ethanol, fuel cell buses for urban transport and power stations mixing biomass like wood pellets with fossil fuels to produce energy. **As a result, car production has increased worldwide.** Some companies are already burning rubbish to produce energy and using methane, or so called landfill gas, from rubbish sites. So, the revolution has already commenced. **Agriculture has changed significantly in recent in the past few decades.**

Exercise 8
See Exercise 2.

Exercise 9
Correct order: 11, 1, 4, 7, 9, 6, 5, 10, 2, 3, 8