

**For Teachers:** Please have the students read the sentences one at a time and correct their pronunciation of each sentence then have them repeat after you. Wait until after they read the sentence (use the number in place of the missing word) to have the students choose the correct answer to fill in the blank. When the students finish the article, move on to the further questions.

日本語訳なしタイプ B もございます。スクロールダウンするとございますので好きな方をご利用下さい。

4[C] – Desert Power

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- As the problem of global warming gets worse, governments around the world are looking for ways to cut the amount of carbon dioxide being produced. Now, a group of 20 German companies have come up with a plan to use the Sahara Desert in North Africa to provide clean electricity to Europe. According to Gerhard Knies of the Desertec Foundation, which is running the project, “Within six hours, deserts receive more energy from the sun than humankind can consume within a year.” The companies hope to use this energy to create electricity in a way that will not harm the environment.

**Further Questions&A**

\*Ask student to answer the question on their own at first. If the student can't answer correctly, have him look at the last page and read the “example answer” for the question. Have the student try to memorize the answer, if it's too long or difficult, you should divide the sentence into 2 or 3 parts to make it easier to remember. Once they have memorized the answer, the teacher should ask the question one last time so that the student can practice answering. Also if you find any mistakes, please mark the page and let me know ASAP.

- 1) Why have governments been looking for ways to cut the amount of carbon dioxide being produced?   
なぜ政府は二酸化炭素の排出を削減する方法を探しているのですか。
- They are looking to cut it, because global warming is getting worse.
- 2) How much energy do deserts receive from the sun?   
砂漠はどのくらいのエネルギー資源を太陽から得ていますか。
- They receive more energy than humankind can consume within a year.
- When people think of solar energy, they usually think of solar panels, which convert sunlight directly into electricity.
- The Desertec plan is different. The foundation plans to build a line of solar power stations in the desert. Solar power stations work by using the strong desert sunlight to turn water into steam. This steam then turns turbines to create electricity. Solar power stations are not new, and four stations like the ones Desertec plans to build have been producing electricity in the desert in California for the last two decades. Desertec, however, plans to build many more solar power stations and send the electricity produced from the Sahara Desert to Europe through power lines.

### Further Questions&A

26. **3)** How is the Desertec plan different from most solar energy plans?  
おお たいようこうはつでん けいかく けいかく そういてん なん  
27. 多くの太陽光発電の計画と Desertec の計画の相違点は何ですか。  
~の代(か)わりに  
28. *They will build solar power stations instead of solar panels.*  
~のような 使(つか) われてきた  
29. **4)** How long have power stations like the ones Desertec wants to use been used?  
しょう のぞ はつでんしょ つか  
30. Desertec が使用したいと望んでいるような発電所はどのくらい使われていますか。  
過去(かこ) ~年間(ねんかん)  
31. *Solar energy stations have been used in California for the past two decades.*  
32. According to Desertec, solar power stations have many good points  
~と比(くら)べて ~することができる  
33. compared with solar panels. They are able to produce electricity in much  
より多(おお)い 分量(ぶんりょう) 備蓄(びちく)する 熱(ねつ)  
34. larger quantities, and they are also able to store the sun's heat,  
~するのを可能(かのう)にする ~と同(おな)じように  
35. allowing electricity to be produced at night as well as during the day.  
その上(うえ) より安(やす)い ~と比例(ひれい)して  
36. Moreover, the power stations are much cheaper to build relative to the  
量(りょう) 彼ら(かれら)が作った 企画(きかく)  
37. amount of electricity they produce. Desertec says that its project could  
供給(きょうきゅう)する 電気(でんき) ~までに  
38. provide 15 percent of Europe's electricity by 2050.

### Further Questions&A

39. **5)** What percentage of Europe's electrical needs can the project provide?  
なん でんき じゅよう けいかく きょうきゅう  
40. ヨーロッパの何パーセントの電気の需要をこの計画は供給できますか。  
41. *It could provide 15 percent of Europe's electricity by 2050.*  
~ではない 支(ささ)える 計画(けいかく)  
42. Not everybody support the new plan. Some say that it would be better to  
集中(しゅうちゅう)する 住宅(じゅうたく)  
43. concentrate on producing solar panels for houses in Europe.  
44. Others say that the power stations will need too much water. Desertec, however,  
~からもたらされた  
45. says that water would be brought from the ocean and that electricity would be  
取(と)り除(のぞ)く 塩分(えんぶん)  
46. used to remove the salt from this water. Some of this water could  
地元(じもと)の 農家(のうか) 作物(さくもつ)  
47. then be used by local farmers for growing crops. In this way, the people  
地域(ちいき) 建(た)てられた 利益(りえき)  
48. in the countries where the stations are built would also profit from the  
49. plan.

### Further Questions&A

50. **6)** Why do some people not support Desertec's plans? (Pick up the sentence from the paragraph.)  
なんにん ひとびと けいかく しじ  
51. なぜ何人かの人々は Desertec の計画を支持していないのですか。  
52. *Some say that it would be better to concentrate on producing solar panels, others say the power stations will need too much water.*  
53. **7)** How could people who live in the countries where the stations are built profit from the plan?  
はつでんしょ ちいき す ひとびと けいかく りえき え  
どのようにして発電所の地域に住む人々が計画から利益を得られますか。  
54. *Desertec would remove the salt from water and give some to the local farmers.*

**\*Choose the correct answer from these choices.**

55. **(41)** The Desertec Foundation <sup>めざしている</sup> aims to Desertec <sup>ききん</sup> 基金は…にめざしている。
56. **1** encourage a group of 20 German companies to clean up the Sahara Desert. <sup>励 (はげ) ます</sup>
57. **2** make use of carbon dioxide <sup>利用 (りよう) する</sup> found in North Africa to produce clean energy. <sup>二酸化炭素 (にさんかたんそ) みつかった</sup>
58. **3** use the desert sun to provide energy without <sup>砂漠 (さばく) 与 (あた) える</sup> damaging the environment. <sup>～なしで 損害 (そんがい) を与える 環境 (かんきょう)</sup>
59. **4** find a way to lessen the <sup>減 (へ) らす</sup> total <sup>全体 (ぜんたい) の</sup> amount of electricity that people <sup>消費 (しょうひ) する</sup> consume <sup>毎年 (まいとし)</sup> each year. <sup>総額 (そうがく)</sup>
60. **(42)** How will Desertec's solar power stations create electricity?
61. Desertec <sup>たいようねつはつでんしよ</sup> の太陽熱発電所はどのように <sup>でんき</sup> 電気を作り出しますか。 <sup>板 (いた)</sup>
62. **1** By using solar panels to make electricity from sunlight. <sup>～を加熱 (かねつ) することによって</sup>
63. **2** By heating water to make steam that will turn <sup>タービン</sup> turbines.
64. **3** By sending hot water from the Sahara Desert to Europe. <sup>結 (むす) びつけることによって</sup>
65. **4** By connecting Africa's power system with the one in California.
66. **(43)** What is one <sup>違 (ちが) い</sup> difference between solar panels and solar power stations?
67. <sup>たいようでん ちばん たいようねつはつでんしよ ひと ちが なん</sup> 太陽電池板と太陽熱発電所の一つの <sup>違 (ちが) い</sup> 違いは何ですか。 <sup>熱 (あつ) くなる 大 (おお) きい 分量 (ぶんりょう)</sup>
68. **1** Solar panels can heat larger quantities of water.
69. **2** Solar panels are able to produce much more energy.
70. **3** Solar power stations are more <sup>普通 (ふつう) の</sup> common in Europe.
71. **4** Solar power stations <sup>続 (つづ) ける</sup> continue to work after dark.
72. **(44)** According to Desertec <sup>費用 (ひよう)</sup> Desertec <sup>費用 (ひよう)</sup> によると…
73. **1** the cost of solar panels is too high for many people in Europe.
74. **2** the project will help <sup>地方 (ちほう) の</sup> local people by providing water for <sup>作物 (さくもつ)</sup> crops .
75. **3** the power stations will <sup>必要 (ひつよう) とする</sup> require large amounts of salt to work <sup>正確 (せいかく) に</sup> properly .
76. **4** the countries where the power stations are built will get <sup>無料 (むりよう) の</sup> free electricity.
77. **(45)** Which of the <sup>次に述 (の) べる事柄 (ことがら)</sup> following statements about Desertec's plan is true?
78. Desertec <sup>はいかく</sup> の計画について <sup>つぎ</sup> 次に述べる <sup>こと</sup> どの事柄 <sup>しんじつ</sup> は真実ですか。 <sup>～に似 (に) ている ～で運営 (うんえい) しているもの</sup>
79. **1** The power station will be similar to <sup>～を熱 (ねつ) するため</sup> ones operating in California.
80. **2** Electricity from the power stations will be used to heat <sup>ほとんどの</sup> water at night.
81. **3** The power stations will provide most of Europe's electricity by 2050.
82. **4** Some people say that the power stations should be built in Europe.

**Review Questions**



83. 1) Why have governments been looking for ways to cut the amount of carbon dioxide being produced?

84. *They are looking to cut it, because global warming is getting worse.*

85. 2) How much energy do deserts receive from the sun?

86. *They receive more energy than humankind can consume within a year.*

87. 3) How is the Desertec plan different from most solar energy plans?

88. *They will build solar power stations <sup>～の代(か)わりに</sup> instead of solar panels.*

89. 4) How long have power stations <sup>～のような</sup> like the ones Desertec wants to use <sup>使(つか)われてきた</sup> been used?

90. *Solar energy stations have been used in California <sup>過去(かこ)～年間(ねんかん)</sup> for the past two decades.*

91. 5) What percentage of Europe's electrical needs can the project provide?

92. *It could provide 15 percent of Europe's electricity by 2050.*

93. 6) Why do some people not support Desertec's plans?

94. *Some say that it would be better to concentrate on producing solar panels, others say the power stations will need too much water.*

95. 7) How could people who live in the countries where the stations are built profit from the plan?

96. *Desertec would remove the salt from water and give some to the local farmers.*

解答: (41)3 (42) 2 (43) 4 (44) 2 (45) 1

### Type B 日本語訳なし

#### 4[C] – Desert Power

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1. As the problem of global warming gets worse, governments around the world are  
 2. looking for ways to cut the amount of carbon dioxide being produced. Now, a  
 3. group of 20 German companies have come up with a plan to use the Sahara  
 4. Desert in North Africa to provide clean electricity to Europe. According to  
 5. Gerhard Knies of the Desertec Foundation, which is running the project, "Within  
 6. six hours, deserts receive more energy from the sun than humankind can  
 7. consume within a year." The companies hope to use this energy to create  
 8. electricity in a way that will not harm the environment.

### Further Questions&A

9. 1) Why have governments been looking for ways to cut the amount of carbon dioxide being produced?

10. 2) How much energy do deserts receive from the sun?

11. When people think of solar energy, they usually think of solar panels, which convert sunlight directly into electricity. The Desertec plan is different. The

12. foundation plans to build a line of solar power stations in the desert.

13. Solar power stations work by using the strong desert sunlight to turn water into  
 14. steam. This steam then turns turbines to create electricity. Solar power stations are  
 15. not new, and four stations like the ones Desertec plans to build have been producing  
 16. electricity in the desert in California for the last two decades. Desertec, however, plans  
 17. to build many more solar power stations and send the electricity produced from the  
 18. Sahara Desert to Europe through power lines.

### Further Questions&A

19. 3) How is the Desertec plan different from most solar energy plans?  
 20. 4) How long have power stations like the ones Desertec wants to use been used?

21. According to Desertec, solar power stations have many good points compared  
 22. with solar panels. They are able to produce electricity in much larger quantities,  
 23. and they are also able to store the sun's heat, allowing electricity to be produced  
 24. at night as well as during the day. Moreover, the power stations are much  
 25. cheaper to build relative to the amount of electricity they produce. Desertec says  
 26. that its project could provide 15 percent of Europe's electricity by 2050.

### Further Questions&A

27. 5) What percentage of Europe's electrical needs can the project provide?

28. Not everybody support the new plan. Some say that it would be better to  
 29. concentrate on producing solar panels for houses in Europe. Others say that the  
 30. power stations will need too much water. Desertec, however, says that water  
 31. would be brought from the ocean and that electricity would be used to remove  
 32. the salt from this water. Some of this water could then be used by local farmers  
 33. for growing crops. In this way, the people in the countries where the stations  
 34. are built would also profit from the plan.

### Further Questions&A

35. 6) Why do some people not support Desertec's plans?  
 36. 7) How could people who live in the countries where the stations are built profit  
 from the plan?

### \*Choose the correct answer from these choices.

37. (41) The Desertec Foundation aims to  
 38. 1 encourage a group of 20 German companies to clean up the Sahara Desert.  
 39. 2 make use of carbon dioxide found in North Africa to produce clean energy.  
 40. 3 use the desert sun to provide energy without damaging the environment.  
 41. 4 find a way to lessen the total amount of electricity that people consume each  
 year.
42. (42) How will Desertec's solar power stations create electricity?  
 43. 1 By using solar panels to make electricity from sunlight.  
 44. 2 By heating water to make steam that will turn turbines.  
 45. 3 By sending hot water from the Sahara Desert to Europe.  
 46. 4 By connecting Africa's power system with the one in California.
47. (43) What is one difference between solar panels and solar power stations?

48. **1** Solar panels can heat larger quantities of water.  
 49. **2** Solar panels are able to produce much more energy.  
 50. **3** Solar power stations are more common in Europe.  
 51. **4** Solar power stations continue to work after dark.

52. **(44)** According to Desertec

53. **1** the cost of solar panels is too high for many people in Europe.  
 54. **2** the project will help local people by providing water for crops.  
 55. **3** the power stations will require large amounts of salt to work properly.  
 56. **4** the countries where the power stations are built will get free electricity.

57. **(45)** Which of the following statements about Desertec's plan is true?

58. **1** The power station will be similar to ones operating in California.  
 59. **2** Electricity from the power stations will be used to heat water at night.  
 60. **3** The power stations will provide most of Europe's electricity by 2050.  
 61. **4** Some people say that the power stations should be built in Europe.

### Review Questions

62. **1)** Why have governments been looking for ways to cut the amount of carbon dioxide being produced?  
 63. **2)** How much energy do deserts receive from the sun?  
 64. **3)** How is the Desertec plan different from most solar energy plans?  
 65. **4)** How long have power stations like the ones Desertec wants to use been used?  
 66. **5)** What percentage of Europe's electrical needs can the project provide?  
 67. **6)** Why do some people not support Desertec's plans?  
 68. **7)** How could people who live in the countries where the stations are built profit from the plan?

解答: (41)3 (42) 2 (43) 4 (44) 2 (45) 1