

Unit 7

Power - The Alternatives

المفردات البعيدة Vocabulary

الكلمة	المعنى	مثال توضيحي
fractional distillation	التقطير الجزئي	مثال Nitrogen can be produced by fractional distillation of air.
global warming	الاحتباس الحراري	مثال Global warming is now called climate change.
crude oil	نفط خام	مثال Crude oil prices raised nearly 60% in 2007.
fossil fuel	وقود حفري	مثال The fossil fuels are finite resources.
government	الحكومة	مثال The government made more services available online.
megawatt	ميغاوات	مثال These reactors are in the 1300 megawatt range.
motoring	قيادة السيارات	مثال This kind of cars is perfect for motoring .
motorist	قائد السيارة	مثال There are speed limits and signs warning motorists .
refining	التصفية/ التكرير	مثال Oil refining is not just about gasoline.
oilfield	حقل بترول	مثال The Miller oilfield was discovered in 1983.
reserves	احتياطيات	مثال Kuwait has huge oil reserves and revenue .
smog	ضباب دخاني	مثال Smog is a kind of air pollution.
polymer	بوليمر	مثال Ships have polymer coated hulls to reduce friction.
wave farms	مزرعة امواج	مثال Wave farms can easily produce renewable energy.
appliance	جهاز منزلي	مثال LG smart appliances are designed for modern living.
asthma	مرض الربو	مثال Susan has high blood pressure and asthma .
breakdown	انهيار / تَعَطُّل	مثال These horses seem to suffer mental breakdowns .
congestion	الازدحام	مثال Traffic congestion is the cause of service delays.
diminish	يُقلل	مثال We should try to diminish the cost of production.
end up with	ينتهي به المطاف	مثال Weak students can end up with a negative score.
generate	يُولد	مثال The new project would generate new jobs.

consult	V.	يَسْتَشِير	مثال I wish you had consulted us before.
last	V.	يَسْتَمِر	مثال This walking tour lasts approximately 35 minutes.
resolve	V.	يُحْلِل / يَفْصِل	مثال I hope this issue gets resolved peacefully.
spoil	V.	يَفْسِد / يَتْلَف	مثال One bad apple spoils the whole bunch.
squander	V.	يُبِدِد / يَفْقِد	مثال We must not squander those precious sacrifices.
waste	V.	يُبْذِر / يُضَيِّع	مثال Do not waste my time please.
menaced by	V.	مُهَدَّد بـ	مثال Today the world is menaced by terrorism
run out	V.	يَنْفَد / يَنْتَهِي	مثال I am afraid, time is running out .
destruct	V.	يُدْمِر	مثال Engineers destructed the house for safety reasons.
procure	V.	يَتَحَصَّل على	مثال I finally procured a 3500 watt gasoline generator.
renewable	Adj.	مُتَجَدِّد	مثال Wave farms can easily produce renewable energy.
non renewable	Adj.	غير متجدد	مثال Oil & coal can produce non renewable energy.
strong	Adj.	قوي	مثال Our strong words should support strong actions.
hazardous	Adj.	خطر	مثال These gases tend to be very hazardous .
invisible	Adj.	غير مرئي	مثال Animal hair and dirt are nearly invisible .
irreversible	Adj.	لا رجعة فيه	مثال All judges rulings are final and irreversible .
finite	Adj.	غير متجدد/محدود	مثال The fossil fuels are finite resources.
self-employed	Adj.	مهنة حرة	مثال He is self-employed and works 40 hours a week.
actually	Adv.	في الحقيقة	مثال The problem actually becomes much more easier.
entirely	Adv.	تماما / كلياً	مثال This service is entirely free of charge.
recently	Adv.	مؤخراً / حديثاً	مثال I have recently changed my opinion of her.

أسئلة على مفردات الوحدة

- Fill in the spaces with the suitable words from the list below

Entirely / motorist / asthma / diminish / end up with / actually

- It took me several weeks to thoroughly acclimatise myself to this ----- new way of life.
- If we don't do something to save energy, we'll ----- irreversible environmental problems.
- Governments should use renewable energy to ----- the amount of pollution.
- How many of you would stop if you saw a ----- who had broken down by the side of the road?
- Using natural oil has ----- saved the sperm whale, which was previously hunted to make oil.



1. Entirely 2. end up with 3. diminish 4. motorist 5. actually

Motoring / consult / procure / government / hazardous / self-employed

1. Most of the Somalis are ----- as herders, farmers, or independent business owners.
2. Before removing stains, ----- a professional cleaner or read our article on removing stains.
3. It remained very difficult during the war to ----- food, fuel and other daily necessities.
4. Unprocessed waste from factories can harm the environment and be ----- to wildlife.
5. The Prime Minister was keen to emphasize his ----- 's commitment to the agreement.



1. self-employed

2. consult

3. procure

4. hazardous

5. government

▪ **Fill in the spaces with the suitable words from the list below**

congestion / spoil / finite / megawatts / resolve / invisible

1. Carbon monoxide is often known as the silent killer as the gas is ----- and has no smell or taste.
2. The police say they want to ----- the situation peacefully, without using force.
3. The project is designed to generate around 30 ----- of power for the national grid.
4. The earth has a ----- number of resources which we must protect.
5. Local people complained that the new office building would ----- the view of the museum.



1. invisible

2. resolve

3. megawatts

4. finite

5. spoil

▪ **Fill in the spaces with the suitable words from the list below**

lasted / breakdown / generate / strong / appliances / actually / motoring

1. The hot weather ----- for the whole month of June.
2. The rice that we eat is ----- a grain that is found inside the seed hull .
3. Scientists predict that ----- storms will become more frequent as the climate changes.
4. The flowing water is used to operate turbines, which ----- electricity.
5. I was late for work because I had a ----- in the middle of the road.
6. Phillips is one of the world's largest producer of household ----- .
7. It was the first time he'd paid a ----- fine.



1. lasted

2. actually

3. strong

4. generate

5. breakdown

6. appliances

7. motoring

Lasts / breakdown / motoring / strong / generate / irreversible

1. Wind turbines use kinetic energy to ----- electrical energy for homes and businesses.
2. Using renewable energy reduces pollution and ensures the supply of natural oil ----- longer.
3. Always carry a phone with you in case you have a ----- on the motorway.
4. These magazines cover all kinds of popular subjects such as ----- , gardening, and sports.
5. He is a ----- personality known for his enthusiasm for modernizing the government structure.



1. generate

2. Lasts

3. breakdown

4. motoring

5. strong

▪ Choose the most appropriate answer from a, b, c and d.

1. Greenhouse gases generated by burning ----- are the main causes of global warming.
 - a. fractional distillation
 - b. fossil fuels
 - c. refining
 - d. polymer
2. Plastic is originally produced from -----
 - a. fractional distillation
 - b. fossil fuels
 - c. crude oil
 - d. polymer
3. Man should be wise in using the Earth's natural resources because they are -----
 - a- irreversible
 - b- strong
 - c- invisible
 - d- finite
4. Taking the train would allow us to avoid the ----- around London.
 - a) motoring
 - b) waste
 - c) congestion
 - d) crude oil
5. Diesel, used in trucks, buses, and trains, comes from ----- , and it is less refined than gasoline.
 - a) motoring
 - b) waste
 - c) congestion
 - d) crude oil
6. Carbon dioxide is produced in huge amounts when ----- are burned.
 - a) fossil fuels
 - b) breakdowns
 - c) motorists
 - d) polymers
7. By smoking for so long, she may have suffered ----- damage to her health.
 - a) strong
 - b) finite
 - c) irreversible
 - d) invisible
8. ----- is an industrial process whereby crude oil undergoes various chemical processes.
 - a) Breakdown
 - b) Polymers
 - c) Smog
 - d) Refining
9. Oil refining separates the various fractions of petroleum by a process called -----
 - a) breakdown
 - b) polymer
 - c) fractional distillation
 - d) fossil fuel
10. Now, the police have caught him, and found that he had ----- almost all the money.
 - a) lasted
 - b) generated
 - c) resolved
 - d) squandered



1. fossil fuels

2. polymer

3. finite

4. congestion

5. crude oil

6. fossil fuels

7. irreversible

8. Refining

9. fractional distillation

10. squandered

حلول أسئلة كتاب الطالب Set Book

1. **Mention two sources of (finite) nonrenewable energy:** اذكر بعض مصادر الطاقة (المنتهية) الغير متجددة:
 - ↪ Oil البترول
 - ↪ Gas الغاز
 - ↪ Coal الفحم
 2. **Mention the sources of alternative (renewable) energy:** اذكر بعض مصادر الطاقة (البديلة) المتجددة:
 - ↪ Wave energy. طاقة الأمواج.
 - ↪ Solar energy. طاقة الشمس.
 - ↪ Wind energy. طاقة الرياح.
 3. **The importance of alternative (renewable) energy ?** ما أهمية الطاقة البديلة (المتجددة) ؟
 - ↪ It is cheap . رخص ثمنها .
 - ↪ It does not cause pollution. لا تسبب التلوث .
 - ↪ It will solve the lake of energy. ستحل مشكلة نقص الطاقة .
 4. **What are the advantages of wave farms?** ما هي مزايا مزارع الأمواج ؟
 - ↪ They are invisible. أنها غير مرئية .
 - ↪ It is clean. مصدر نظيف للطاقة .
 5. **Why some people are against using wave power ?** أسباب معارضة انشاء مزارع الامواج (العيوب) ؟
 - ↪ It is dangerous to the ships and fish . مصدر خطورة على الأسماك والسفن .
 - ↪ It is expensive. تعتبر مكلفة .
 - ↪ It will affect tourism . سوف تؤثر على السياحة .
 6. **What are the advantages of solar energy ?** مزايا الطاقة الشمسية ؟
 - ↪ It is clean. انها نظيفة .
 - ↪ It is renewable. انها متجددة .
 7. **What are the disadvantages of solar energy ?** عيوب الطاقة الشمسية ؟
 - ↪ It is expensive (at the beginning) . تعتبر مكلفة (عند الانشاء) .
 - ↪ It is affected at night and in winter. تتأثر ليلا و شتاءا .
 8. **How can energy be saved at home?** كيف نوفر الطاقة بالمنزل ؟
 - ↪ Switch off any unnecessary lamps. اطفاء جميع الأنوار غير الضرورية .
 - ↪ Switch off any unnecessary appliances. اطفاء جميع الأجهزة غير الضرورية .
 9. **How can we save (diminish) energy in our cars?** كيف نوفر الطاقة بالسيارات ؟
 - ↪ We can use smaller cares. يمكن استخدام سيارات غيرية .
 - ↪ We can share cares with othe people. يمكن مشاركة السيارة مع الغير .
 - ↪ We can use alternative modes of transportation. يمكن استخدام وسائل نقل بديلة .
 10. **Oil is used for different purposes. (Discuss)** ما هي استخدامات النفط ؟
 - ↪ Oil is used as petrol for cars. وقود للسيارات .
 - ↪ Oil is used as polymers for plasti. بوليمر يستخدم لصناعة البلاستيك .
 - ↪ Oil is used to generate electricity. يستخدم لتوليد الكهرباء .
- & What are the advantages & disadvantages of usig fossil fuels?** مزايا و عيوب الوقود الحفري ؟
- ↪ **Advantages :** Fossil fuels are cheap and easy to get. المزايا : رخص ثمنها وسهولة الحصول عليها .
 - ↪ **Disadvantages :** Fossil fuels are finite, and they cause pollution. العيوب : منتهية وتسبب التلوث .

شرح القواعد Grammar

الجملة الشرطية (IF)

- معنى (if) هو (لو / اذا) ... وتُستخدَم الجملة الشرطية في اللغة الإنجليزية للتفكير فيما سيحدث، أو ما كان من الممكن أن يحدث، أو ما نتمناه أن يحدث. مثل أن تقول "لو كنت غني، لكنت امتلكت طائرة"
- دائما هناك مقطعين للجملة الشرطية وهما (فعل الشرط و جواب الشرط)

الحالة صفر

- تستخدم للتعبير عن الحقائق العلمية والحالات العامة

	فعل الشرط [مضارع بسيط]		جواب الشرط [مضارع بسيط]
IF	مثال I am thirsty	,	I drink water.
	مثال we freeze water		it turns into ice.

الحالة الأولى

- تستخدم للتعبير عن أحداث ممكنة الحدوث في الوقت الحالي أو مستقبلا

	فعل الشرط [مضارع بسيط]		جواب الشرط [مستقبل بسيط]
IF	مثال I travel to Egypt	,	I will visit the pyramids.
	مثال you study hard		you will get high marks.

الحالة الثانية

- تستخدم هذه الحالة للتعبير عن أشياء غير محتملة الحدوث / أو لنصيحة شخص آخر

	فعل الشرط [ماضي بسيط]		جواب الشرط [مصدر الفعل + would]
IF	مثال I were a millionaire	,	I would buy that expensive villa.
	مثال Salem came earlier		he would meet Mr. Aly.

الحالة الثالثة

- تستخدم الحالة الثالثة للتعبير عن الندم تجاه الأشياء التي لا يمكن ان تحدث الآن لأنها قد تمت ووقعت بالفعل

	فعل الشرط [ماضي تام]		جواب الشرط [التصريف الثالث + would have]
IF	مثال I had seen you	,	I would have talked to you.
	مثال we had needed your help		We would have telephoned you

يمكن بسهولة وضع (if) في وسط الجملة من خلال البدء بمقطع (جواب الشرط) ثم (if) ثم مقطع (فعل الشرط)

IF	 I had had a lot of money	,	I should have bought a big house
	I should have bought a big house	if	I had had a lot of money.

- حدد موقع (if) وجملة فعل الشرط التي تليها مباشرة ثم جملة جواب الشرط
- من خلال الجزء المكتمل حاول تحديد حالة قاعدة (if) هل هي (أولى/ثانية/ثالثة)
- اكمل الجزء الناقص حسب تكوين الحالة (كما هو موضح بالشرح)

مفتاح حل قاعدة IF

تدريبات على القاعدة السابقة

▪ Correct the verb form between brackets صحح الفعل بين الأقواس

- If it hadn't rained heavily , there (not be) a flood.
- If he (sleep) early , he would have woken up early.
- If he hadn't climbed the tree , he (break) his leg.
- If we (go) shopping , we would have food to eat.
- If you (heat) water to 100 degrees , it boils.
- Plants die if they (not get) water.
- You (get) purple if you mix red and blue.
- If we don't hurry , we (miss) the train.
- If I see Mike , I (tell) him about the party.
- I will speak to him if I (see) him tomorrow.



- | | | | | |
|------------------------|--------------|----------------------|--------------|---------|
| 1. would not have been | 2. had slept | 3. would have broken | 4. went | 5. heat |
| 6. do not get | 7. get | 8. will miss | 9. will tell | 10. see |

▪ Correct the verb (If conditional type I) صحح الفعل - تدريب على قاعدة لو (الحالة الأولى)

- If he buys that car , it (cost) him much .
- I will not let them in if they (be) late again.
- If the weather (be) warm , we'll go to the sea .
- If demand for a product rises , its price (rise) too.
- His teeth will become bad if the boy (eat) much sweet .
- He won't catch the train if he (not leave) early .



- | | | | | | |
|--------------|--------|-------|--------------|---------|-------------------|
| 1. will cost | 2. are | 3. is | 4. will rise | 5. eats | 6. does not leave |
|--------------|--------|-------|--------------|---------|-------------------|

▪ **Correct the verb (If conditional type II)** (الحالة الثانية) صحح الفعل - تدريب على قاعدة لو

1. If I spoke French , I (**travel**) to Paris.
2. You would meet them if you (**come**) earlier.
3. If I were a bird , I (**fly**)
4. If I were rich , I (**help**) the poor.
5. If you (**apologize**) for him , he would forgive you.



1. would travel

2. came

3. would fly

4. would help

5. apologized

▪ **Correct the verb (If conditional type III)** (الحالة الثالثة) صحح الفعل - تدريب على قاعدة لو

1. He (**answer**) all the questions if he had revised his lessons.
2. If he (**not help**) me , I'd have been late.
3. If I had cleaned the house , I (**go**) to the cinema.
4. If I had known that , I shouldn't (**go**) there at all.
5. I (**come**) sooner if I had known you were there.
6. If I (**accept**) that promotion , I would have worked in Milan.



1. would have answered

2. had not helped

3. would have gone

4. have gone

5. would have come

6. had accepted

▪ **Correct the verb form between brackets**

1. We will let you know if anything (**change**).
2. If the sun (**not rise**) one day , there would be panic.
3. If I have time later , I (**practice**) a new song on the piano.
4. I would wish for perfect health if I (**have**) one wish.
5. If you don't brush your teeth , you (**get**) cavities.
6. You'll eventually achieve your goal if you (**set**) your mind to it.
7. I (**travel**) to the moon if I inherited a billion dollars.
8. If you close your eyes , it (**be**) easier to relax.



1. changes

2. did not rise

3. will practice

4. had

5. will get

6. set

7. would travelled

8. is