

India's energy needs

Level of difficulty: ●●●

Before you read

Do you know which five countries are the biggest energy consumers in the world? How might that change over the next 20 years?

Reading

Read this article from the *Financial Times* and answer the questions.

India and its energy needs: Demand is rising but lags rest of the world

by Kevin Morrison

1 India, a sleeping giant in the energy world, may have finally awoken, with energy consumption projected to grow by the second fastest rate during the next 25 years, putting it just behind China, its bigger neighbour. Future energy usage, however, will still fall well short of consumption rates in the developed world. India's population of about 1 billion represents about 16 per cent of the world's population, but accounts for less than 2 per cent of its energy consumption.

2 Even if the country achieves the forecast growth rate of 2.3 per cent for energy use during the next 25 years, each person would still be using less than half of the energy used by the average person in the developed world by 2030. Nevertheless, the growth in energy consumption in India is expected to result in a doubling of greenhouse gas emissions over the next 25 years, according to the International Energy Agency (IEA), the energy watchdog for the developed world.

3 'The increased amount of CO₂ emissions to come out of India and China, will negate whatever we are trying to do in the West in attempting to reduce emissions,' says John Waterlow, an energy

analyst at Wood Mackenzie. 'This is the conundrum,' he says. 'How can the West tell the developing world that it must limit the amount of emissions it can emit, which, in turn, affects the development of their economies?' In spite of the increase in emissions in India and China, developed countries will have far higher per capita emissions than in India. This is largely due to India's wide use of wood and cow dung in rural areas for cooking and heating.

4 Biomass and waste accounts for more than 50 per cent of India's total energy use. Although its share is expected to decline during the next 25 years as India's consumption of oil, gas and coal increase, it will still remain the most common fuel for residential energy consumption, the IEA said in its World Energy Outlook report. The IEA forecasts that Indian oil demand will rise to 5.4m barrels a day by 2030, with more than 90 per cent of this consumption to be supplied by imports. This growth may push India into the top tier of oil consumers in the world, but still puts it well behind China.

5 India's low level of car ownership is the main reason for the relatively low use of oil. Even if the car ownership increases in

the next decade from the present nine cars per 1,000 people to 24 cars per 1,000, it is still lower than China's growth rates and a fraction of the levels of car ownership in Europe, where one in two own a car. 'India will never be able to have the same rate of car ownership as the West because there is simply not enough oil in the world,' says Mr Waterlow.

6 The IEA's projected strong economic growth rates of more than 4 per cent a year on average over the next 25 years will stimulate gas demand among industrial users in India. Despite a recent significant gas discovery, this will not be enough to meet future demand. Therefore a substantial increase in gas imports is forecast, mainly through shipments of liquefied natural gas (LNG). India has signed a \$40bn deal to import LNG from Iran and is also negotiating with Bangladesh and Burma about building pipelines to import gas. Nevertheless, coal will remain the preferred energy for industrial users. The IEA projects Indian coal demand to rise at similar rates to total growth rates of energy use in the country during the next 25 years.

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- Read the whole article. How many types of energy are referred to, and what is expected to happen to India's consumption of each over the coming years?
- Read paragraphs 1 and 2 and find the meanings of the words in *italics* as they are used in this context.
 - ... energy consumption *projected* to grow by the second fastest rate ...
 - made a picture or film appear on a large screen
 - calculated to be in the future
 - stuck out beyond an edge or surface
 - ... energy usage, however, will still *fall well short of* consumption rates ...
 - be a clear equivalent to
 - be a lot more than
 - be much less than
 - ... 1 billion *represents* about 16 per cent of the world's population ...
 - officially speak or take action for other people
 - is equal to
 - be a symbol of
 - Even if the country achieves the *forecast* growth rate ...
 - prediction of the weather
 - what is happening now
 - what is expected to happen in the future
 - Even if the country achieves the forecast *growth rate* ...
 - speed at which something increases in size
 - payment fixed according to a standard scale
 - percentage charged for borrowing money
 - ... half of the energy used by the *average* person ...
 - not unusually big or small
 - typical of most of the people (or things) in a group
 - usual standard, level or amount
 - ... is expected to *result in* a doubling of greenhouse gas emissions ...
 - cause to happen
 - success or achievement of something
 - profit or loss made by a company over a period of time
- Use the correct form of the words and expressions from Exercise 2 to complete these sentences.
 - China has a strong economic which is expected to last for several decades.
 - Energy savings last year were only €50,000, which the €90,000 target.
 - The over 50s the majority of our clients.
 - Falling share prices calls for the CEO's resignation.
 - The is for more oil price rises.
 - Our sales are to grow by 4% a year.
 - The worker in Spain earns €1,200 a month.
- Look at paragraph 3 and find the words and expressions which mean the following.
 - cause something to have no effect
 - confusing and difficult problem
 - industrialised countries (2 expressions)
 - countries that are changing their economic system to one based on industry
 - as a result
 - when a country or region increases its wealth, for example by changing the economic system
 - for each person
 - by many people and in many places
- What do these numbers refer to in paragraphs 4 and 5?
 - 50
 - 25
 - 5.4
 - 90
 - nine
 - one in two
- Read paragraph 6 and say whether these statements are true or false. In India ...
 - the economy is expected to grow annually by over 4%.
 - the demand for gas is expected to increase in the industrial sector.
 - large deposits of gas have been found.
 - there will be sufficient locally produced gas to meet the needs of industry.
 - the government is in negotiations with three countries to import gas via pipelines.
 - gas is the most common energy source with industrial users.
 - the demand for coal is expected to remain stable.

Over to you 1

What is the West doing to reduce CO₂ emissions? How could some of the world's largest energy users reduce their consumption? Why might they resist reducing their consumption?

Over to you 2

Use the Internet to help you find out about the economic growth rate in highly industrialised countries and compare it to the growth rate in fast-growing economies like China and India. What are the implications of this?