



WATER MANAGEMENT

SUPERHERO
SIR ROGER WALTERS

ARCH ENEMY
FLOODING

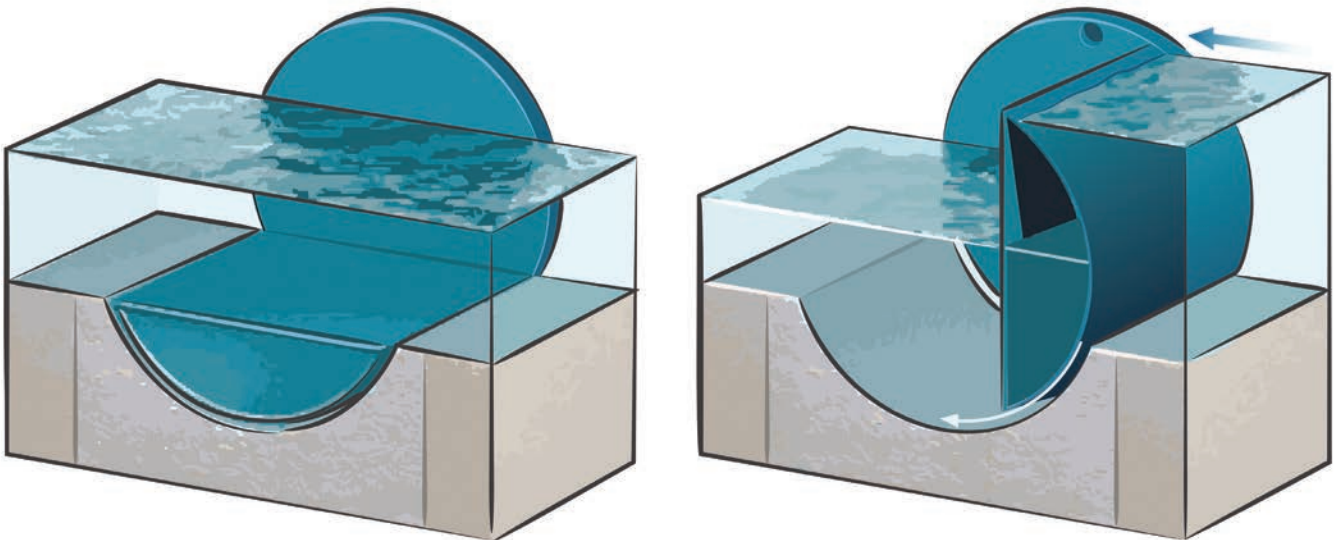
307 PEOPLE DIED WHEN HIGH TIDES AND A STORM SURGE MOVING FROM THE NORTH SEA FLOODED AREAS OF THE THAMES ESTUARY IN 1953.



PROPOSALS WERE PUT FORWARD TO BUILD A BARRIER IN THE THAMES TO PROTECT CENTRAL LONDON.



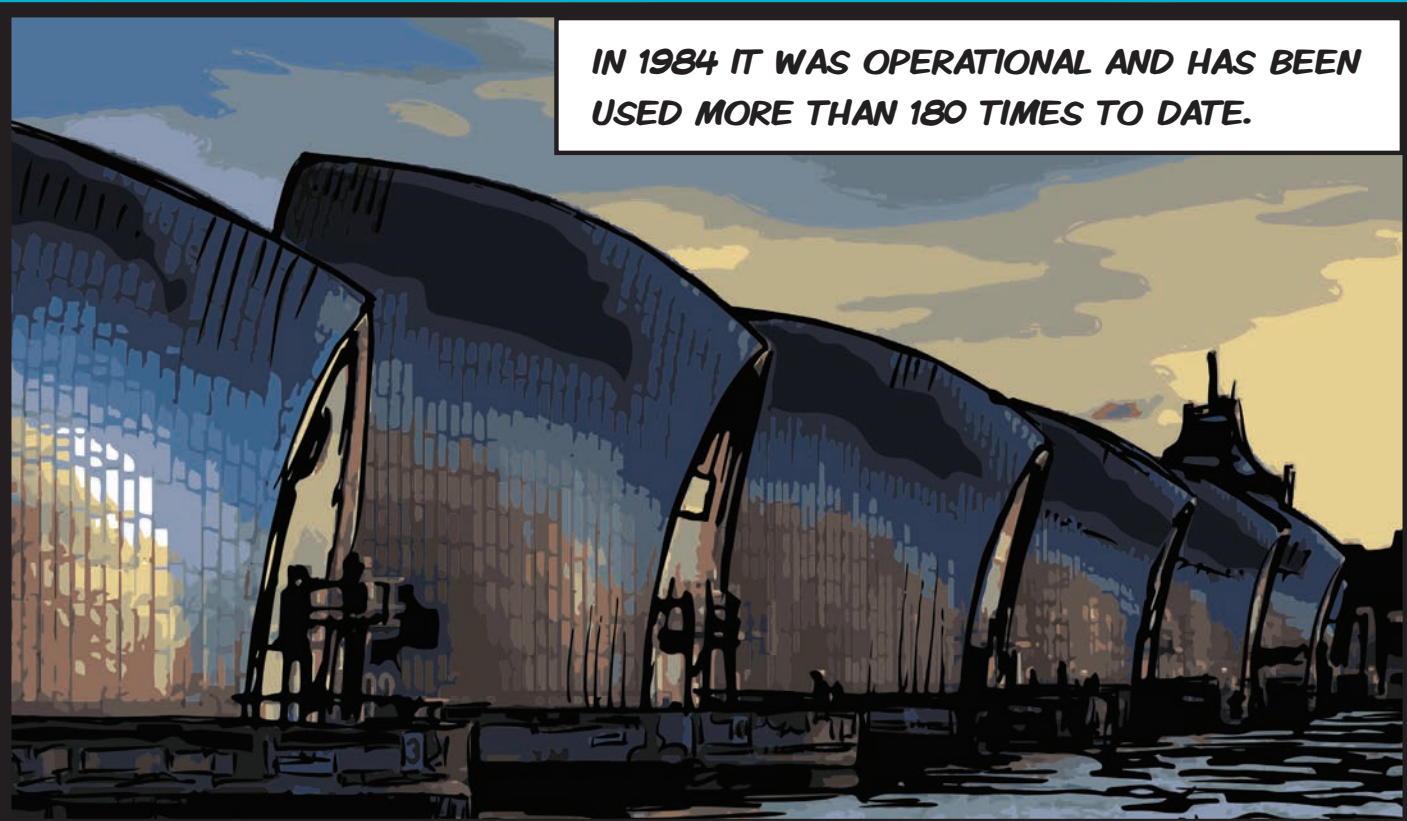
THE CONCEPT OF THE ROTATING GATES WAS DEVISED BY REGINALD CHARLES DRAPER.



SIR ROGER WALTERS LED THE DESIGN TEAM FOR THE THAMES BARRIER WITH RENDEL, PALMER AND TRITTON ENGINEERS.



IN 1984 IT WAS OPERATIONAL AND HAS BEEN USED MORE THAN 180 TIMES TO DATE.



MANY OTHER COUNTRIES ARE PREPARING FLOOD DEFENCE SCHEMES TO SAFEGUARD THEIR COASTLINES AND CITIES.



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WASTE MANAGEMENT

SUPERHEROES

SIR JOSEPH BAZALGETTE

'CAPTAIN SANITATION'

ANDY MITCHELL

'INFRASTRUCTO'

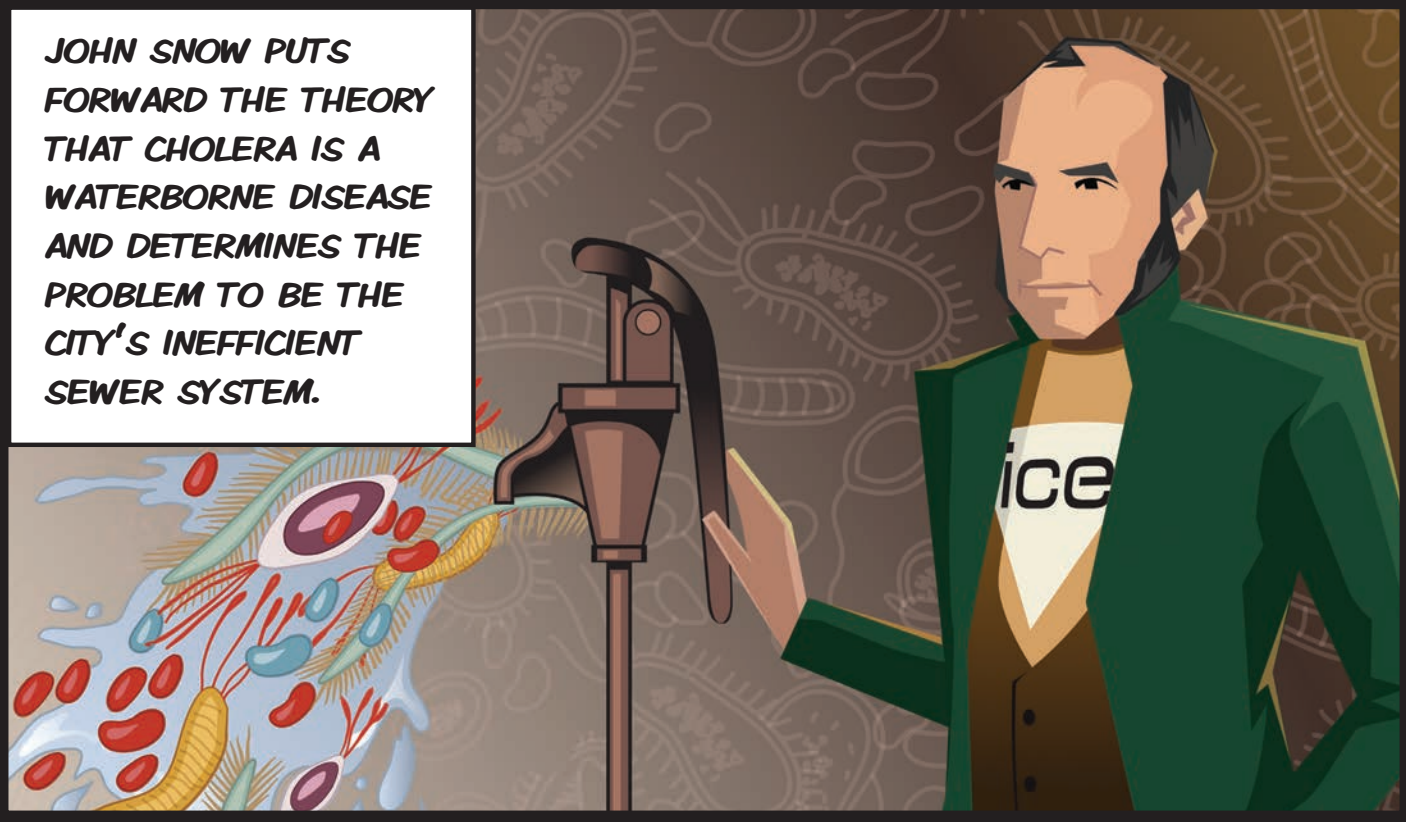
ARCH ENEMY

WATERBORNE DISEASES

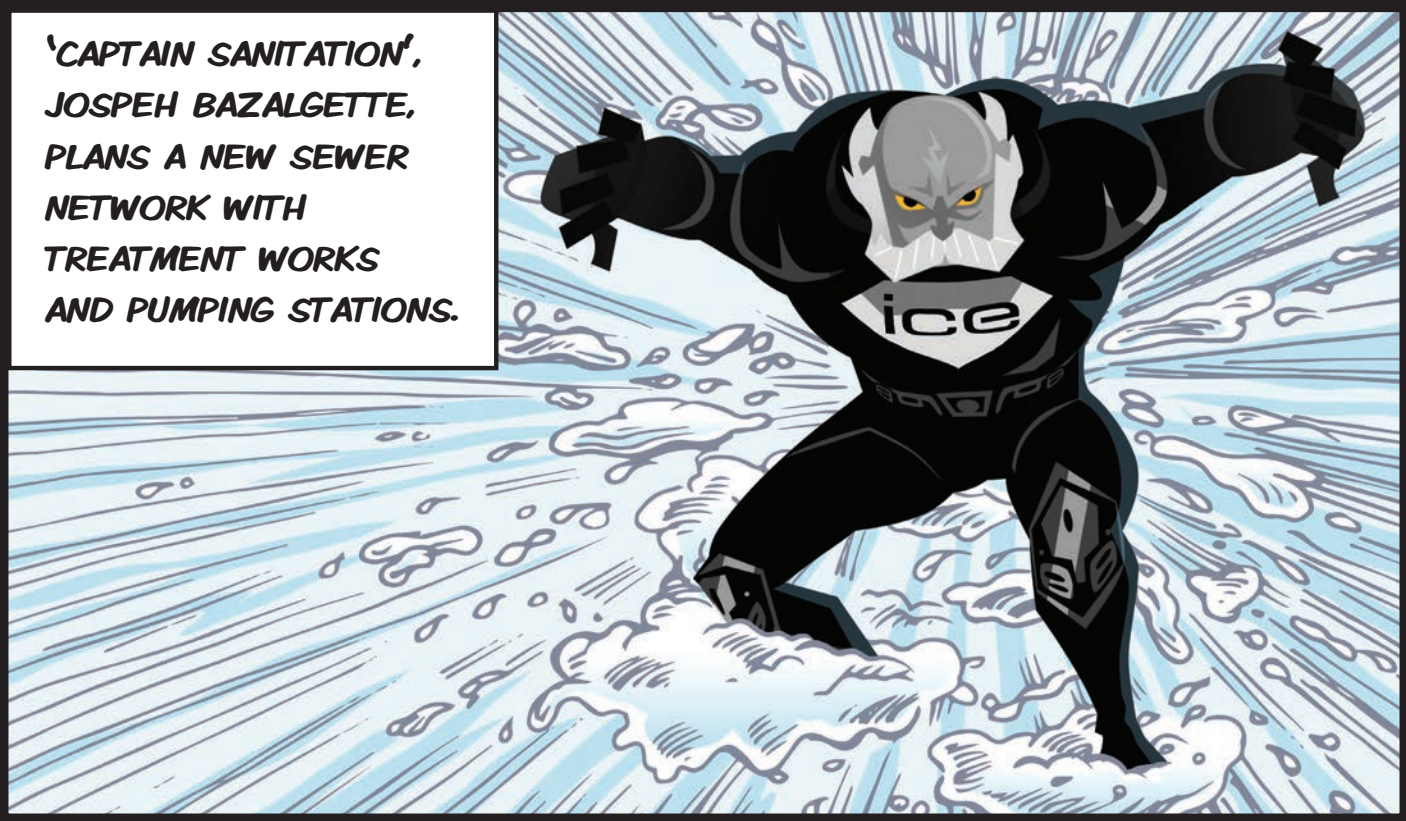
AN OUTBREAK OF
CHOLERA IN 1854
KILLS MORE THAN
10,000 LONDONERS.



JOHN SNOW PUTS
FORWARD THE THEORY
THAT CHOLERA IS A
WATERBORNE DISEASE
AND DETERMINES THE
PROBLEM TO BE THE
CITY'S INEFFICIENT
SEWER SYSTEM.



'CAPTAIN SANITATION',
JOSEPH BAZALGETTE,
PLANS A NEW SEWER
NETWORK WITH
TREATMENT WORKS
AND PUMPING STATIONS.



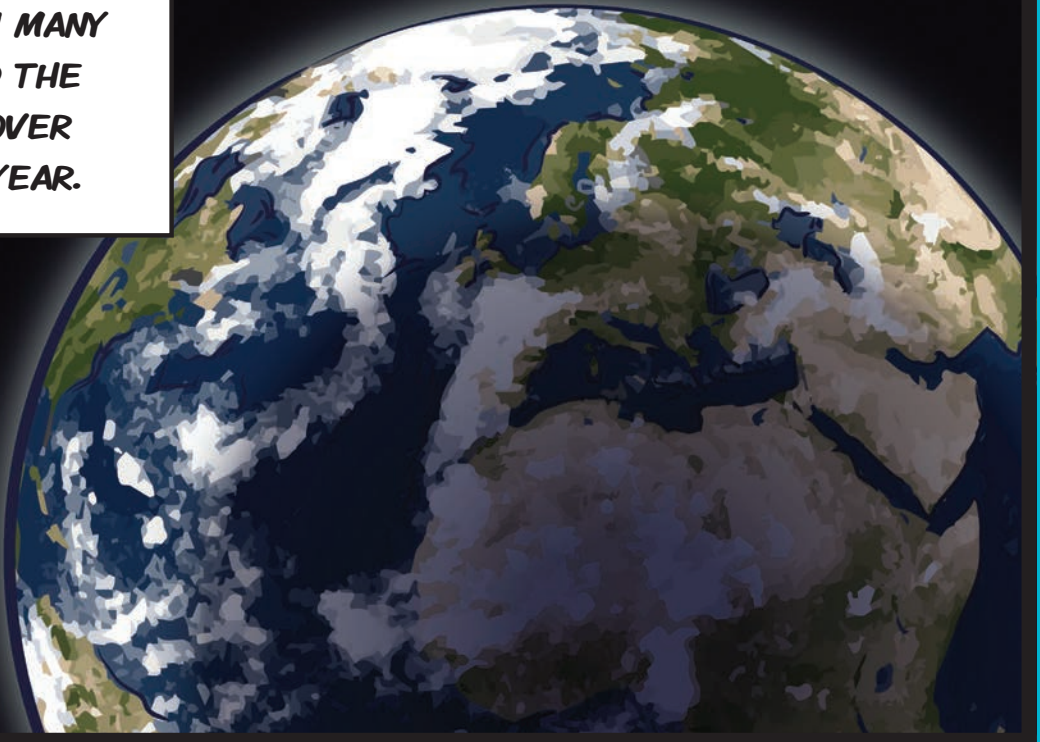
HE DOUBLED THE SIZE OF THE PIPES AND TUNNELS, WHICH HAS EXTENDED THE LIFE OF THE NETWORK TO THE 21ST CENTURY.



TODAY, HOWEVER, THE SYSTEM IS STRUGGLING TO COPE WITH THE DEMANDS OF EIGHT MILLION LONDONERS. THAMES WATER HAVE APPOINTED 'INFRASTRUCTO', ANDY MITCHELL, TO LEAD THE PLAN FOR A NEW 'SUPER SEWER' - THE THAMES TIDEWAY TUNNEL.



SADLY CHOLERA IS STILL A MAJOR PROBLEM IN MANY COUNTRIES AROUND THE WORLD AND KILLS OVER 100,000 PEOPLE A YEAR.



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WATER SUPPLY

SUPERHEROES

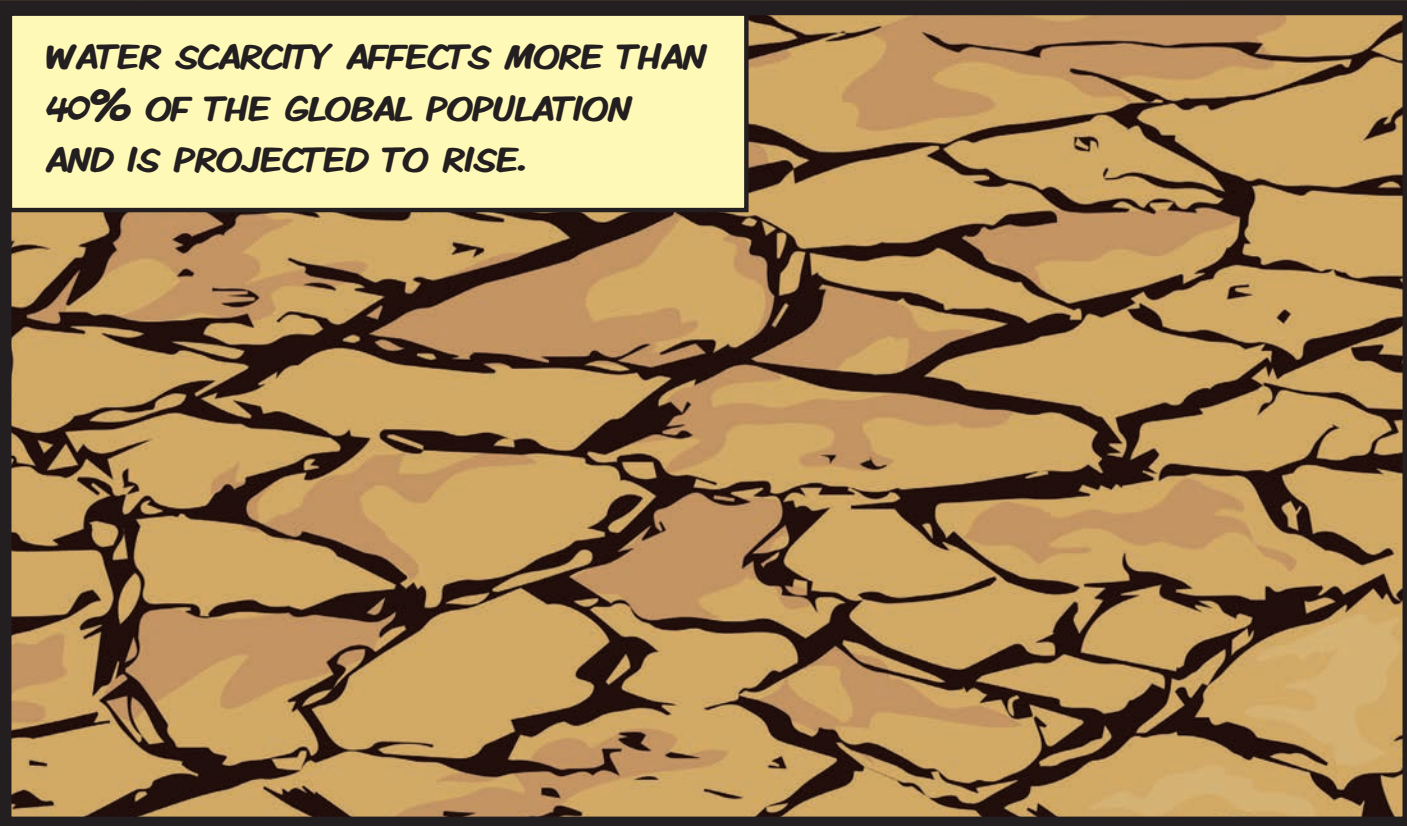
PARTHAJIT PATRA
'METRO MAN'

BRITTANY HARRIS
'WATER WOMAN'

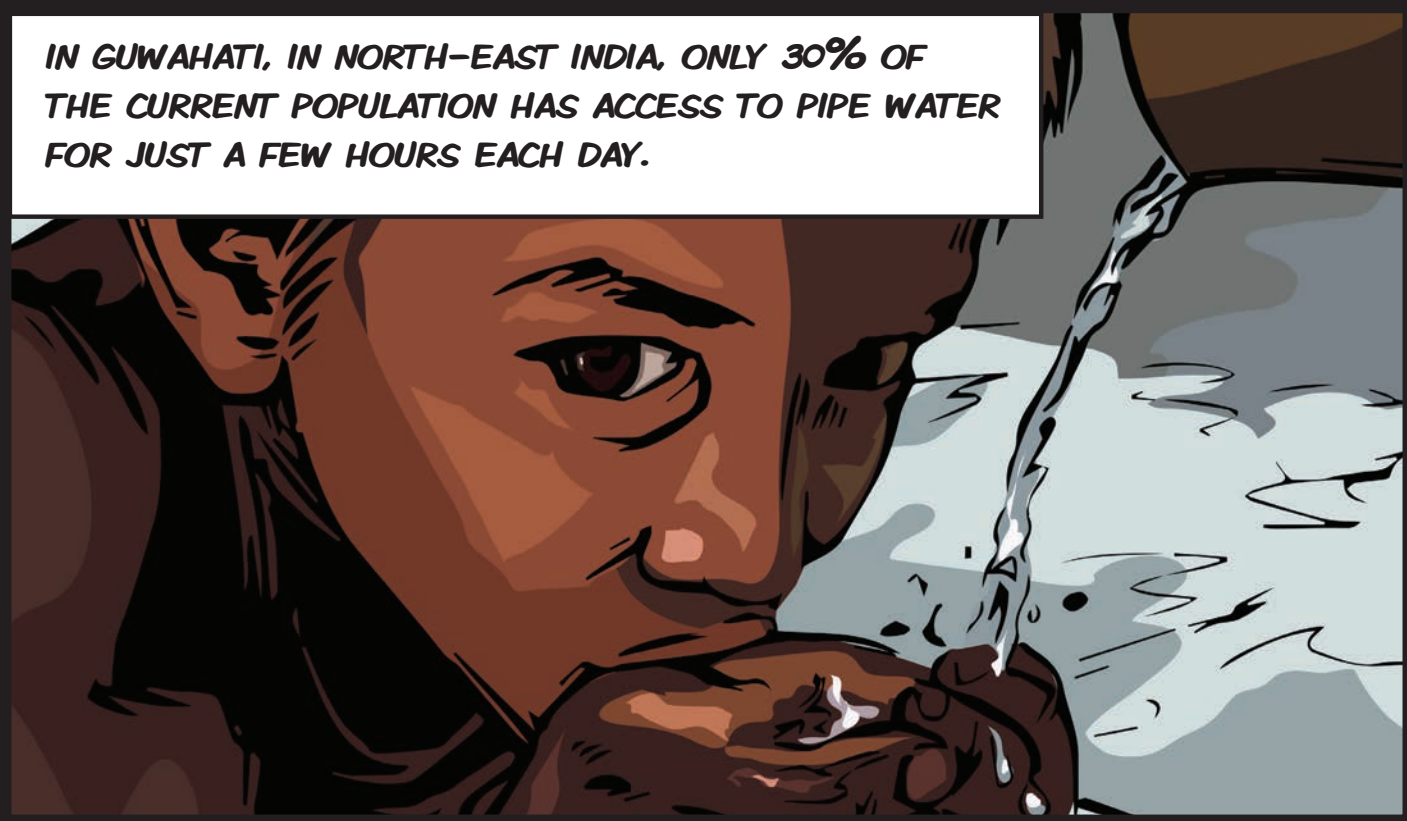
ARCH ENEMIES

WATER SCARCITY & CONTAMINATION

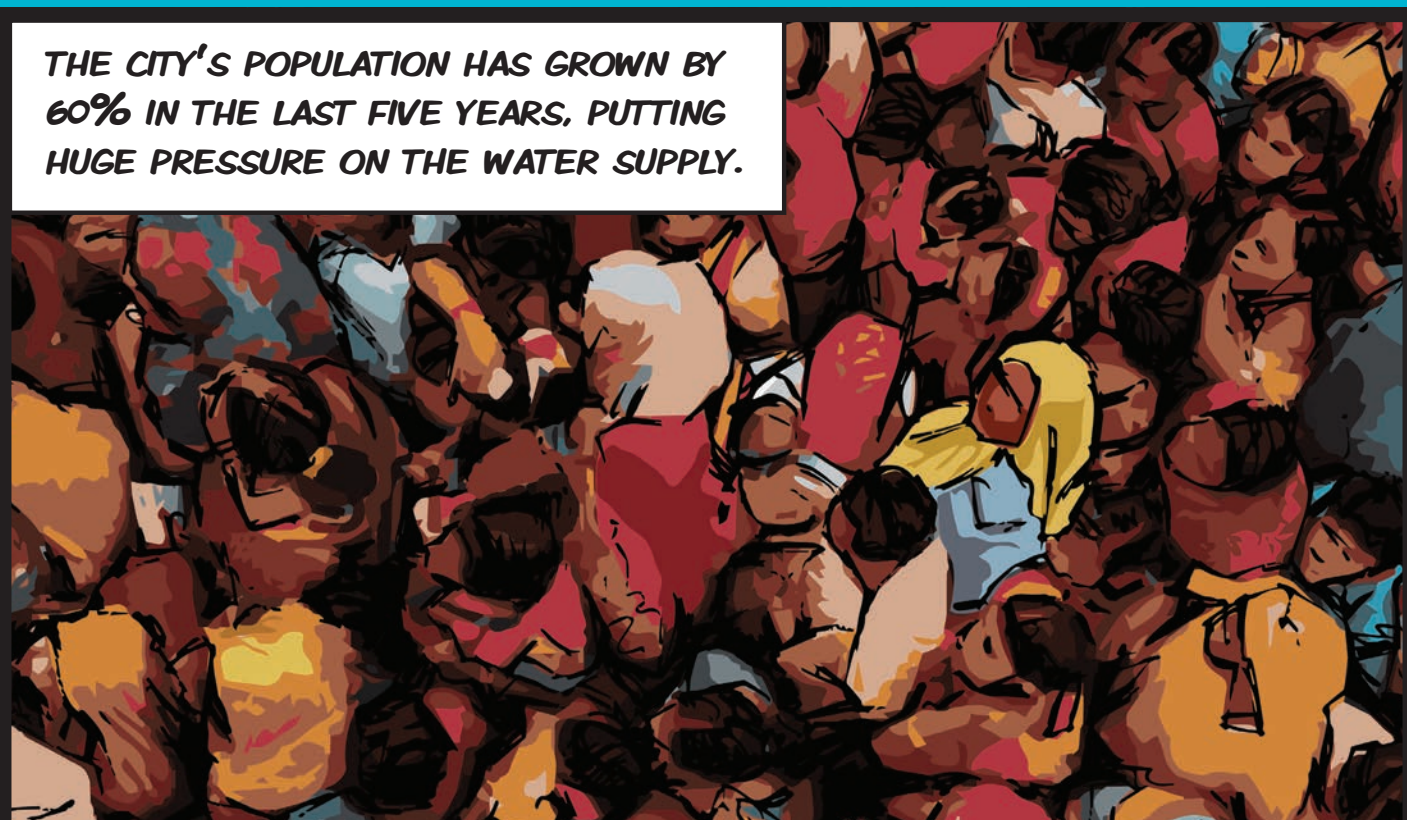
WATER SCARCITY AFFECTS MORE THAN 40% OF THE GLOBAL POPULATION AND IS PROJECTED TO RISE.



IN GUWAHATI, IN NORTH-EAST INDIA, ONLY 30% OF THE CURRENT POPULATION HAS ACCESS TO PIPE WATER FOR JUST A FEW HOURS EACH DAY.



THE CITY'S POPULATION HAS GROWN BY 60% IN THE LAST FIVE YEARS, PUTTING HUGE PRESSURE ON THE WATER SUPPLY.



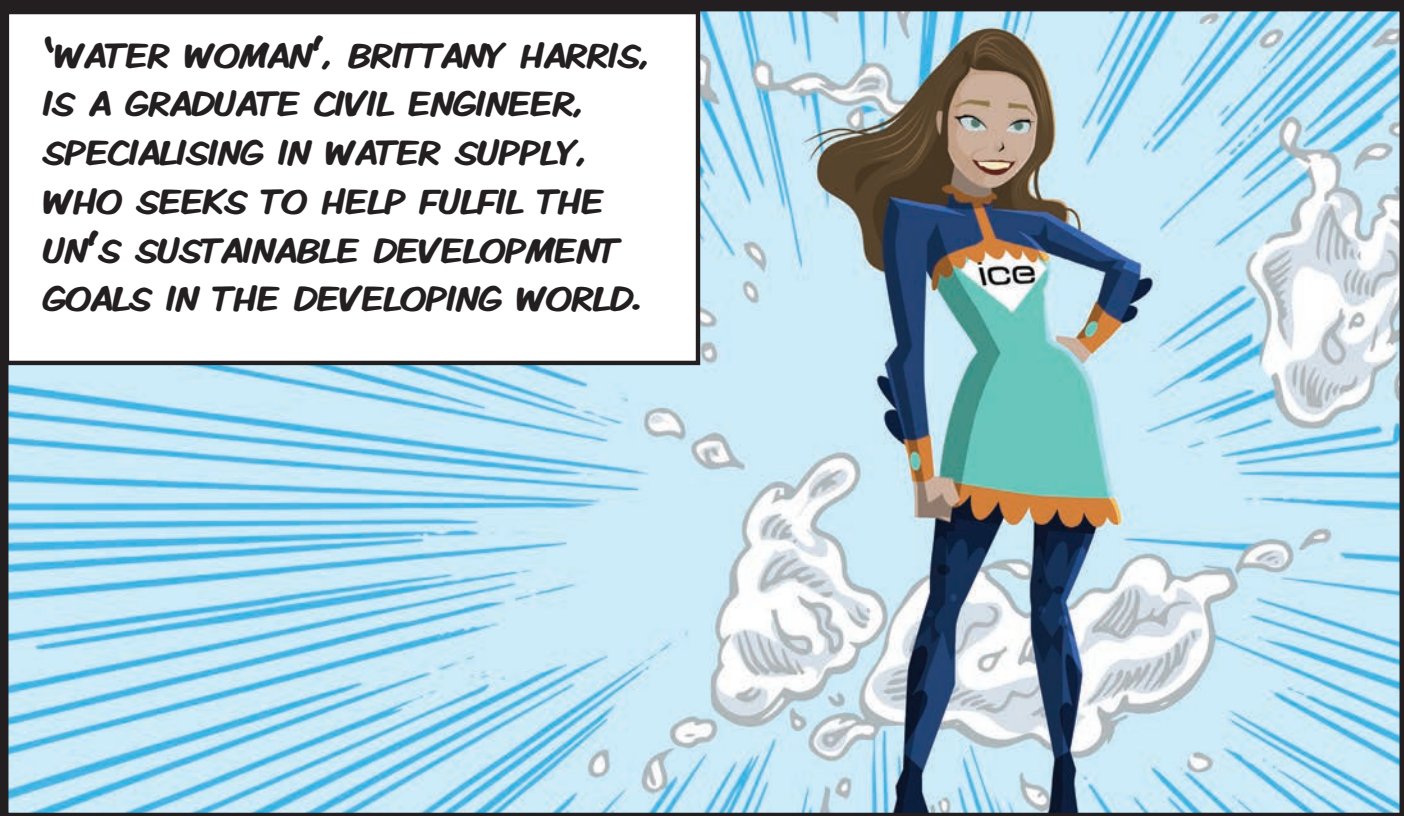
'METRO MAN', PARTHAJIT PATRA, HAS PLAYED A KEY ROLE IN THE PLANNING, DESIGN AND IMPLEMENTATION OF THE GUWAHATI WATER SUPPLY PROJECT TO PROVIDE A CONTINUOUS SUPPLY OF SAFE DRINKING WATER.



THE UNITED NATIONS RECOGNISE THAT 2.6 BILLION PEOPLE HAVE GAINED ACCESS TO IMPROVED DRINKING WATER SINCE 1990, BUT 663 MILLION ARE STILL WITHOUT.



'WATER WOMAN', BRITTANY HARRIS, IS A GRADUATE CIVIL ENGINEER, SPECIALISING IN WATER SUPPLY, WHO SEEKS TO HELP FULFIL THE UN'S SUSTAINABLE DEVELOPMENT GOALS IN THE DEVELOPING WORLD.



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ENERGY

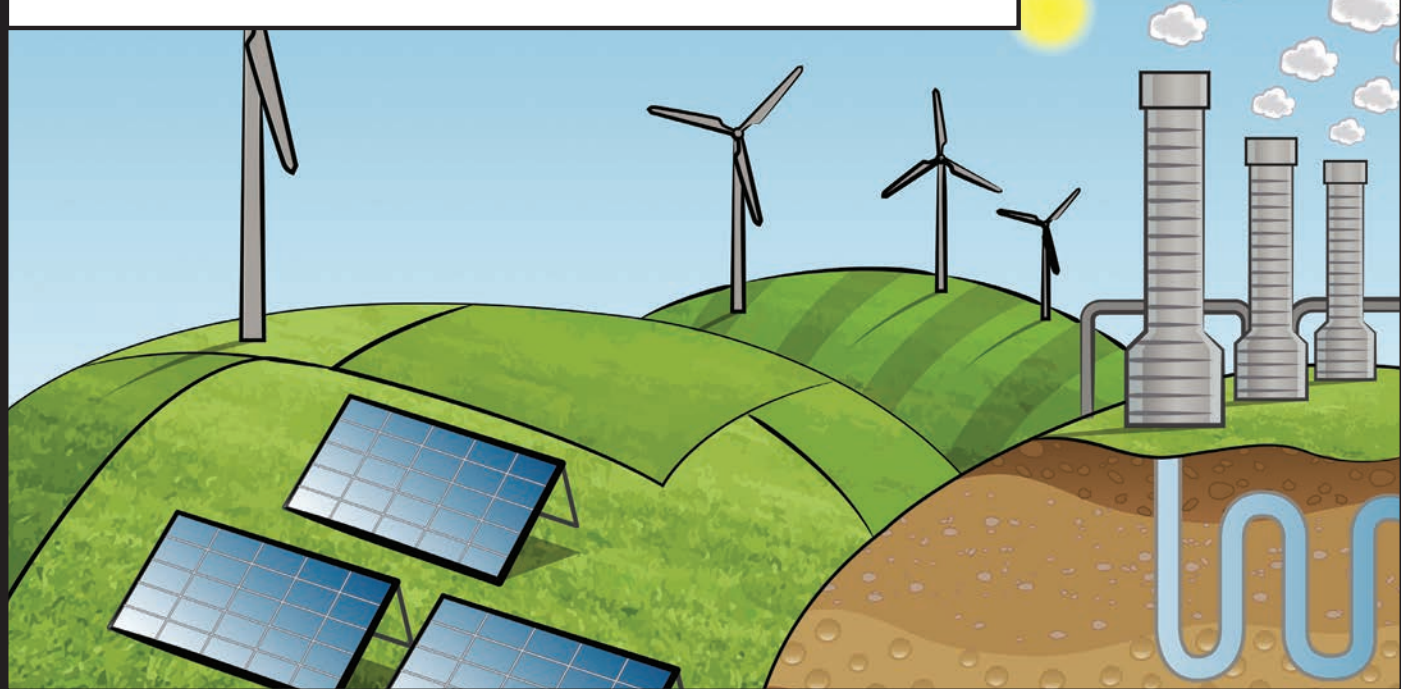
SUPERHEROES
RENEWABLE ENERGY ENGINEERS

ARCH ENEMY
GLOBAL WARMING

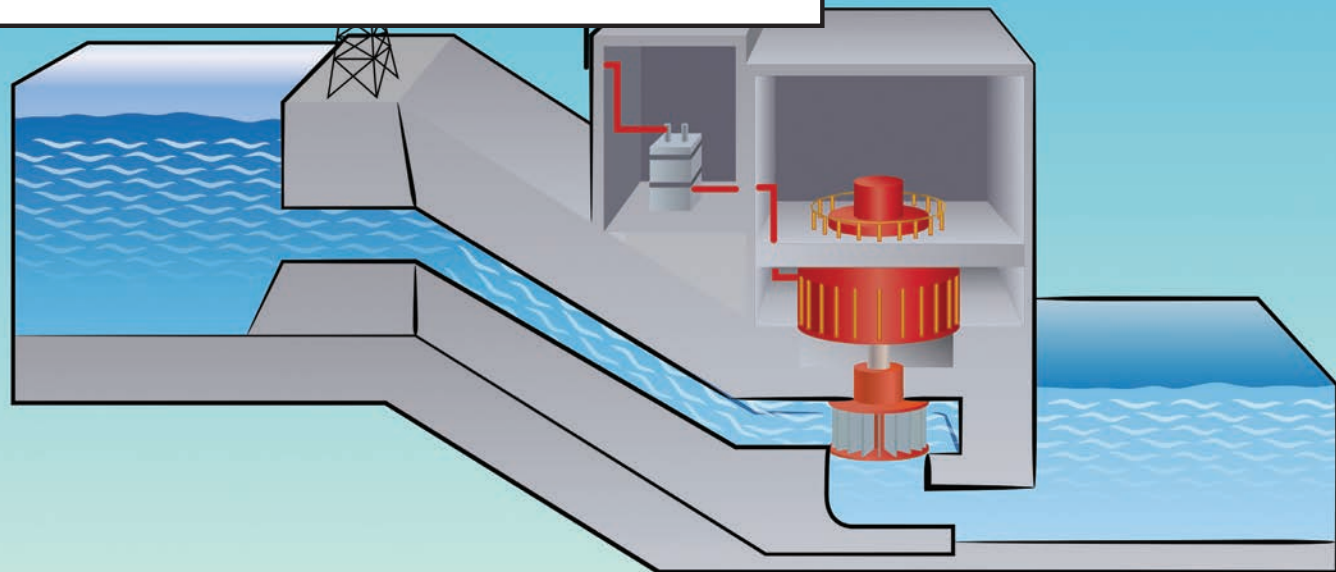
THE GLOBAL DEMAND FOR ENERGY CONTINUES TO RISE ALONGSIDE THE DANGEROUS CONSEQUENCES OF POLLUTION AND GLOBAL WARMING.



IN 2016 ABOUT 16% OF THE WORLD'S ELECTRICITY WAS GENERATED FROM RENEWABLE ENERGY SOURCES.

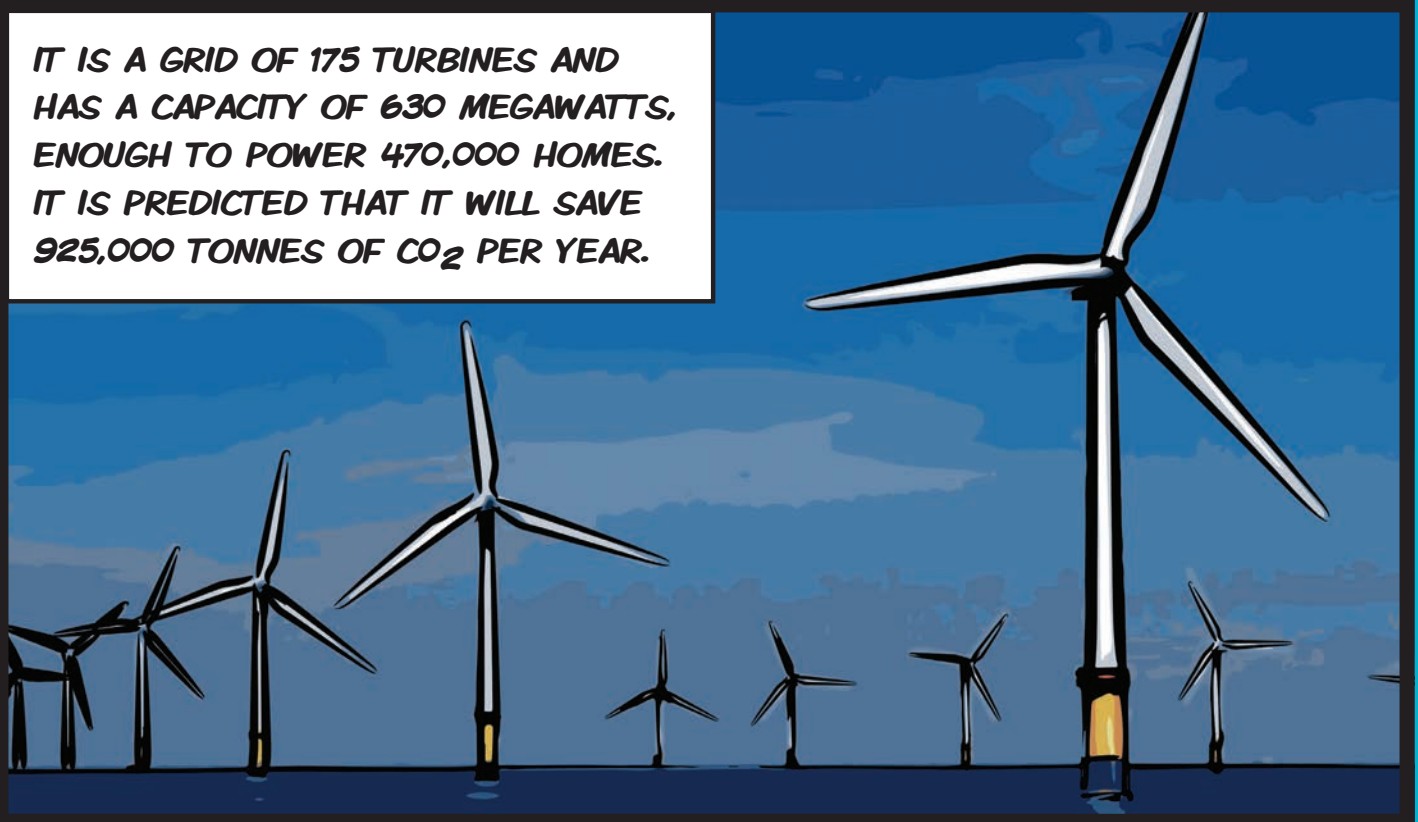


HYDROPOWER IS THE MOST WIDELY DEPLOYED OF THE SUSTAINABLE ENERGY TECHNOLOGIES, WITH COUNTRIES SUCH AS NORWAY, BRAZIL AND NEW ZEALAND LEADING THE WAY.

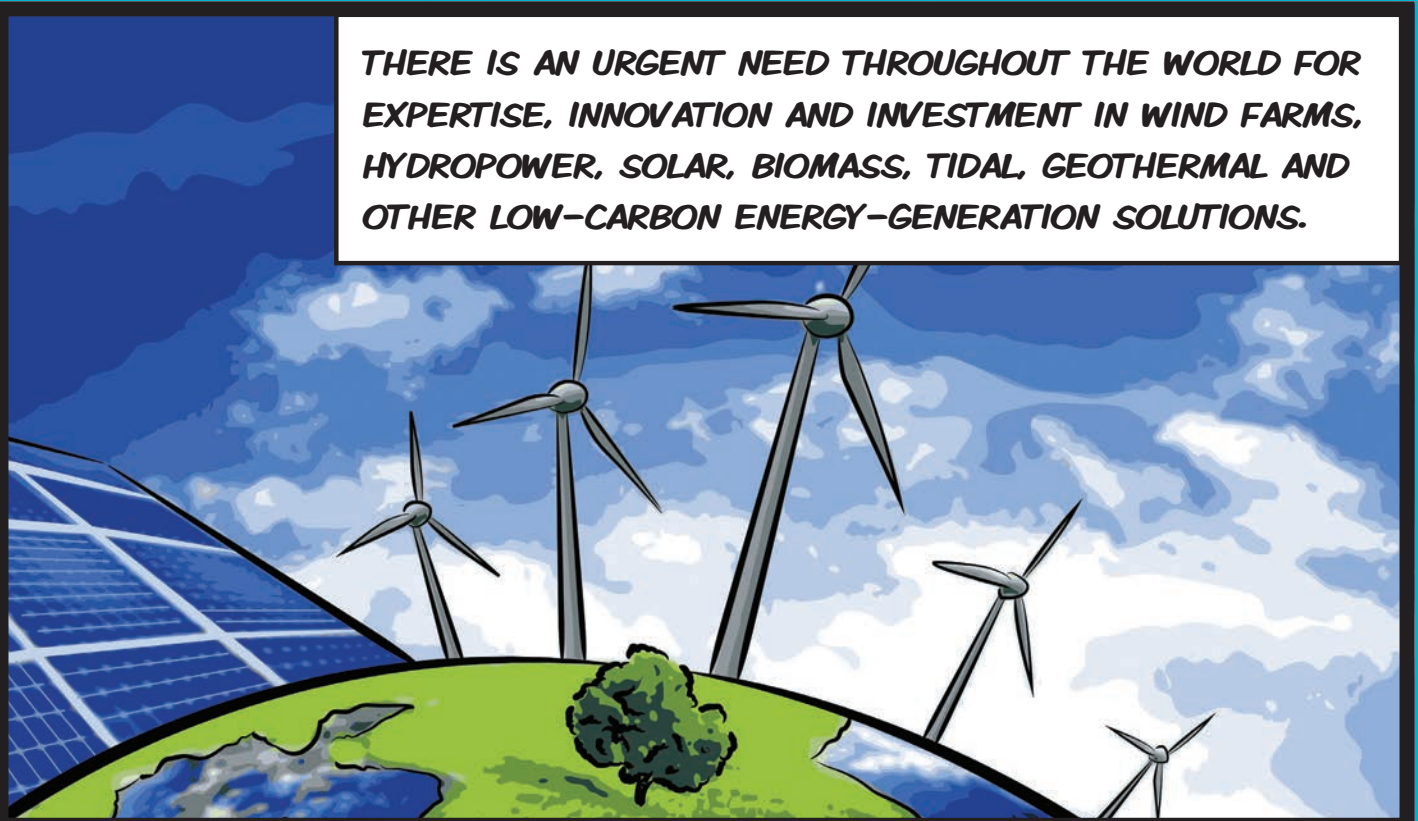




WIND FARMS ARE VERY EFFECTIVE IN THE RIGHT LOCATIONS. ONE OF THE RECENT SUCCESSES IS THE LONDON ARRAY IN THE THAMES ESTUARY, THE WORLD'S LARGEST OFFSHORE WIND FARM.



IT IS A GRID OF 175 TURBINES AND HAS A CAPACITY OF 630 MEGAWATTS, ENOUGH TO POWER 470,000 HOMES. IT IS PREDICTED THAT IT WILL SAVE 925,000 TONNES OF CO₂ PER YEAR.



THERE IS AN URGENT NEED THROUGHOUT THE WORLD FOR EXPERTISE, INNOVATION AND INVESTMENT IN WIND FARMS, HYDROPOWER, SOLAR, BIOMASS, TIDAL, GEOTHERMAL AND OTHER LOW-CARBON ENERGY-GENERATION SOLUTIONS.

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