

Breaking free from fossil fuels

PALASH RANJAN SANYAL

It came as no surprise when the National Oceanic and Atmospheric Administration (NOAA) last week announced that the earth's global temperatures in March 2016 were the most abnormally warm on record for any month in the 137 years of its record keeping and 1.22 degree Celsius above average in the 20th century. Can you guess when this record was last broken?

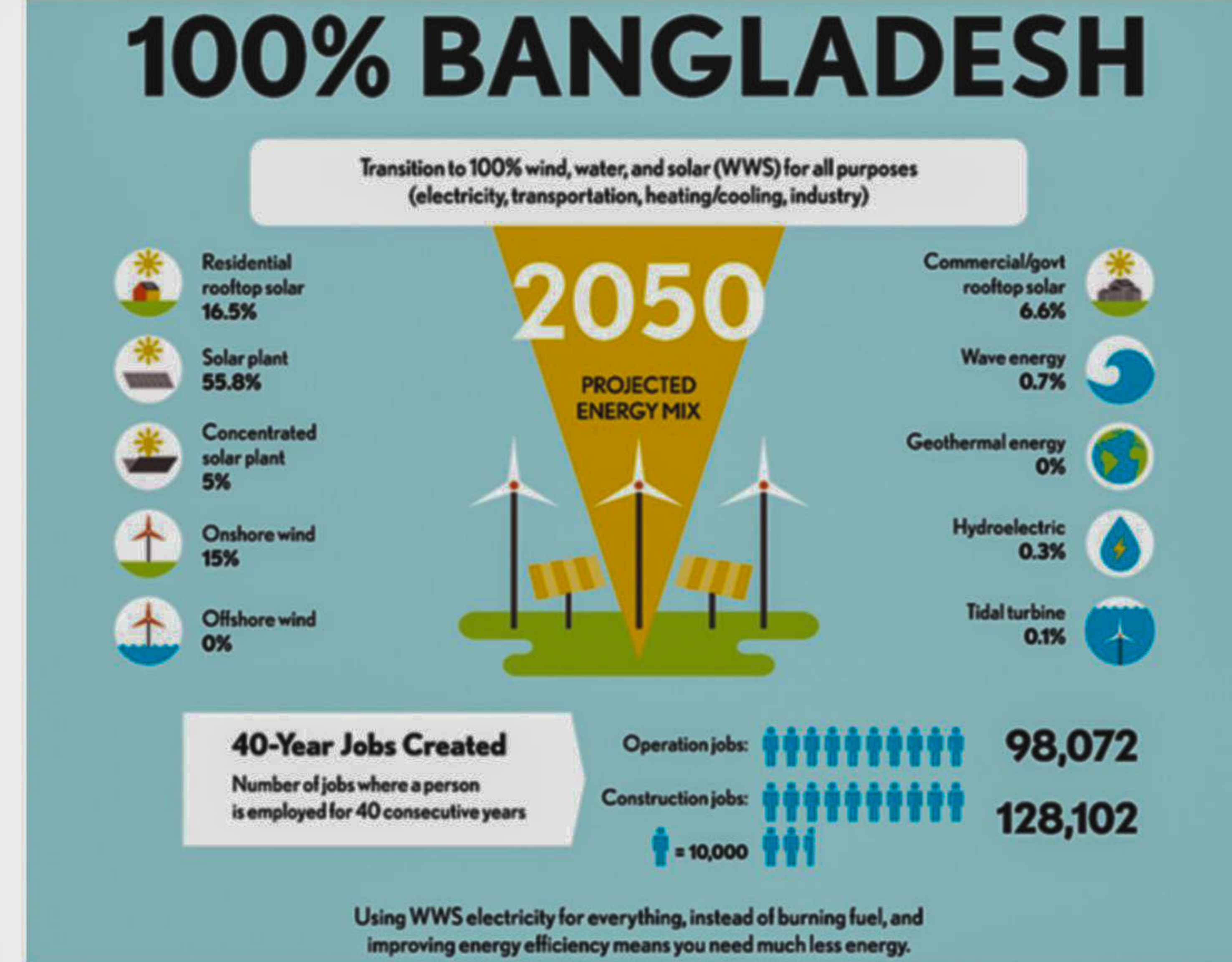
The March Anomaly is the second month in a row that this remarkable feat has occurred. The world is having one of its hottest years already. The scorching global warming has also been felt by Bangladeshis, as can be observed from last week's mild heat wave across Rajshahi and Khulna.

Climate change is a real threat and Bangladesh is at the very forefront of that change. The Intergovernmental Panel on Climate Change has warned that rising sea levels will wipe out more cultivated land in Bangladesh than anywhere in the world. And then there's the threat of mass migration, which is already a reality. It's being estimated that by 2050, around 15 to 40 million people will migrate from their native place.

The primary human activity affecting the amount and rate of climate change is greenhouse gas emissions from the burning of fossil fuels. It is important to mention here that Bangladesh's emission, or carbon footprint, in respect to the rest of the world is insignificant. Nevertheless, over the last couple of years, we have experienced firsthand the consequences of severe pollution thanks to our own faults.

Bangladesh's energy, agriculture and transportation sector depend on fossil fuels. With subsidies on fossil fuel, the transition to renewable energy is as slow as it can get. The Power Division has targets to increase the renewable energy generation up to 10 percent of the total electricity by 2020.

But why depend on fossil fuel when people are welcoming renewable sources? According to the government-run Infrastructure Development Company Limited (IDCOL), around three million solar home systems have been installed till the first quarter of 2014 under their programme, with a rate of 50 to 60 thousand installations on average in a month. That covered 10 percent



of the rural off-grid population. IDCOL has a target to finance six million solar home systems by 2017. A comparison of energy mix between 2008 and 2015 will also show that renewable energy sources are getting momentum.

Subsidies on oil price have gone down, but its use has not. Tk. 90 billion has been allocated for power subsidy in this year's budget, which will go to the Bangladesh Power Development Board. This used to be around Tk. 81.4 billion in 2012. Do keep in mind the drop in the price of oil and also the fact that the

majority of the electricity is generated from oil-based plants. The Power Development Board purchases electricity from rental and quick rental power plants at prices ranging between Tk. 13 and Tk. 23 per unit and sells the electricity to consumers at an average of Tk. 6.5 per unit, which is a net negative for the government.

The International Energy Agency (IEA) published a special edition of World Energy Outlook, prior to the Paris Summit, where they proposed a five-point strategy that could deliver a peak in energy-related emissions by

2020. It included points like progressively reducing the use of the least-efficient coal-fired power plants and banning their construction; increasing investment in renewable energy technologies in the power sector; and gradual phasing out of fossil-fuel subsidies to end-users by 2030. The overall idea is to break free from fossil fuels and create 100 percent renewable dependence, which is not unrealistic.

Researchers from Stanford University analysed energy roadmaps for 139 countries and calculated the energy that would be needed to meet the demands for

INFOGRAPHIC: THE SOLUTIONS PROJECT

household electricity, industry, agriculture, transportation, heating and cooling. They examined the best renewable energy sources for different countries to determine the perfect source for each country that would enable it to go completely renewable by 2050. According to the report, 100 percent is scientifically doable. Also the report of the International Renewable Energy Agency points out that the transition to a sustainable energy future by 2030 is technically feasible and economically viable. But no current policy keeps us anywhere near this 100 percent goal by 2030 or 2050 while the use of fossil fuels is crippling the environment and heritage sites, threatening biodiversity and human existence.

The Stanford study also concludes with a statement that is also true for Bangladesh: "The study finds that the conversion to Wind, Water and Solar (WWS) is technically and economically feasible. The main barriers are still social and political."

The Bangladesh government states that energy demand means there is no alternative but to generate more power from fossil fuels, as they plan to establish 25 coal-fired power plants by 2022, adding 23,692 MW to the electricity output. Of the total, 16 will be built by the public sector and nine by the private sector.

So, with subsidies being constant and with new plans to fund coal-fired plants, it is unlikely that Bangladesh will be able to break free from fossil fuels in the near future, even though its solar installations rate is the world's fastest. The government's long term plan to promote renewable energy is not adequate, and the target has changed frequently since 2011-12, after the inclusion of the nuclear energy plan.

We suffer, and yet we fail to take steps to ensure that we are not the cause of further environmental degradation. The growth of a country depends on energy, but not at the cost of our environment. Rather than going for the easy solution, we need to take a step back and plan our actions, so that our future is not affected.

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COPENHAGEN CONSENSUS

Digitise land records Unlock economic opportunities

BJORN LOMBERG

Land records in Bangladesh are a bit of a mess—according to the records there is more land owned than actual land exists (according to Anir Chowdhury, Adviser, Prime Minister's Office). The land administration process still follows the antiquated system that British Colonial rulers instituted, from surveys all the way to collection of property taxes. Three different ministries oversee the records system, working independently and with little coordination.

If you need to access your own land record, or transfer property after a sale or an inheritance, you will have to visit multiple government agencies over the course of at least a month—and you should also be ready to pay, possibly under the table.

Records are still kept on paper documents, and in addition to being recorded in painstakingly detailed handwritten transactions, they also use archaic language that ordinary citizens cannot comprehend. Surveys are supposed to be done every five years, but most are extremely out-of-date, so even if you find your record, the survey map may not reflect the reality on the ground. And in coming years, land administration is likely to

get even more complicated, given that Bangladesh is already one of the most densely populated countries in the world.

How can Bangladesh best address the problems that stem from its outdated land records system? New research by Sultan Hafeez Rahman, Executive Director of the BRAC Institute of Governance and Development (BIGD), and research assistant Sumaiya Kabir Talukder finds that digitising the land records system would provide an incredible Tk. 619 of benefits per taka spent.

The labourious and time-intensive records system creates room for errors due to honest mistakes or the potential for outright corruption. If you need to transfer the title of a parcel or address any other land-related issue, officials might demand compensation before they move the process along. One study found that land administration accounts for nearly 40 percent of all bribes paid at the local level in Bangladesh ("Cost of Corruption and Misgovernance at the Local Levels: Findings of a Survey", Kaneez Siddique, Programme for Research on Poverty Alleviation No. 57, Grameen Trust).

The complexity of the system and tendency for officials to delay or block the process encourages people

to rely on informal title arrangements. But this informality weakens the security of property rights and undermines economic activity.

The analysis proposes digitising land records and simplifying the application process, a strategy the

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national government began to explore in 2010. Savar upazila has piloted a programme to digitise its land office, and the transition from a paper-to software-based system has already cut costs and made land services much simpler for citizens to use.

Electronic land records nationwide would make information easy to acquire through a publicly accessible system, and the time, monetary, and other transactions costs required to access records or transfer parcels would fall tremendously. Digitisation would also make it impossible for

purchase computers and software and Tk. 650 million to scan the 50 million existing land records. It would also cost Tk. 90.42 million to staff the offices each year. In total, this implies a cost of Tk. 2.8 billion.

The benefits would accrue due to more speedy expedition. Today, a typical transaction involving land records costs Tk. 1,045, takes 30-45 days, and requires five different trips to government offices. With digitisation of the system, however, the cost would fall to just Tk. 80, and it would take only 15 days and two visits ("Service delivery process innovation: insights from Digital Bangladesh, Innovation and Development", Hasanuzzaman Zaman). Including benefits of fewer legal transactions and fewer bribes, the total direct benefits reach Tk. 481.8 million annually. So just counting the direct benefits, each taka spent to digitise the land records system would do more than Tk. 3 of good.

However, the largest benefit from digitisation will come from increasing the security of property rights across the country. It is well-known in economics that there is a link between more secure property rights and higher economic growth.

Assuming that land digitisation will move Bangladesh a small way towards a society with more secure property rights, and based on large-scale estimates of property right impacts on GDP growth across a wide range of nations, the experts predict that land digitisation would bring benefits of more than Tk. 160 billion over the next 15 years, and possibly more than Tk. 1.3 trillion by 2070. This indicates indirect benefits of Tk. 616 for every taka spent.

So, in total, Tk. 619 in direct and indirect benefits result from each taka spent to digitise land records.

Of course, the Tk. 619 is crucially dependent on the estimated growth increase. Yet, even with vastly different estimates, the benefits of land digitisation are phenomenally higher than the costs. If you were in charge, would this be one of the solutions you think should be at the top of Bangladesh' list of priorities? Let us hear from you at https://copenhagen.fbapp.io/landad_minipriorities. We want to continue the conversation about how to do the most good for every taka spent.

The writer is president of the Copenhagen Consensus Center, ranking the smartest solutions to the world's biggest problems by cost-benefit. He was named one of the world's 100 most influential people by Time magazine.

CROSSWORD BY THOMAS JOSEPH

- ACROSS**
- Enjoys Aspen
 - Pistachio part
 - Bike part
 - Sound system
 - Heaps
 - Belgian sleuth
 - Many Swiss bankers
 - Heredity study
 - Sheep sounds
 - Heckler's cry
 - Restaurant freebies
 - Used up
 - Gardner of film
 - Flimflams
 - Army brass
 - "The Odd Couple" director
 - Didn't punish
 - Clarinet's kin
 - Not attractive
 - Radius partner
 - Fixes copy
 - League member
- DOWN**
- Antlered animal
 - Toy with a tail
 - Press
 - West African nation
 - Cherry center
 - Bank job
 - Misstep
 - Summer sign
 - Auction unit
 - Stretches over
 - Horse healers
 - Alpine goat
 - Volcano shape
 - Lushes
 - Be boastful
 - Valentine word
 - Dash
 - Shoe part
 - Faint
 - Convenient
 - Snowy bird
 - Film units
 - Skilled
 - Hawaiian coffee area
 - Clothing line
 - That girl
 - Pea holder
 - Paris pal

YESTERDAY'S ANSWER

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