

# Sustainable energy for Dhaka City

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OUR entire way of life and all our economic activities rely on energy -- in fact on more of it. However, the world is now facing most serious challenges in energy supply which can be a more devastating crisis than the world wars wrought. Global energy depletion has already begun, although few countries realise it. Presently the energy producing resources like fossil fuel, gas, coal, and uranium have reached their peak position. It is predicted that those non-renewable energy sources are going to decline from that position in every location of the earth sooner than later.

Dominant consumption of non-renewable fuels for electricity production is leading to increased Green House Gases (GHG) emission into the atmosphere. According to the International Energy Agency (2011), approximately 901 grammes of CO<sub>2</sub> or equivalent is released per kilowatt hour of electricity generated by burning coal. Presumably, global urban populations are mainly responsible for GHG emissions due to their consumption of bulk amount of energy for the mechanical lifestyle. While, on the contrary, still 1.3 billion people in the world live without access to electricity and 2.7 billion have no access to clean cooking facilities. Admittedly, energy crisis will happen in future and then urban inhabitants will suffer

ally due to the rapidly growing population. According to the power system Master Plan 2010, the forecasted demand would be 19,000 megawatt by the year 2021 and 34,000 megawatt by 2030. Till now much of our energy comes from non-renewable sources which are facing challenges of being exhausted. Presently, Bangladesh has 20.5 TFC recoverable natural gas reserve and 420 million tonnes of coal reserve. Noticeable, gas fields are already facing crisis of supply for electricity generation. For example, Sangu gas field has reduced the supply from a well.

Typical of a developing country, the capital city of Dhaka itself consumes almost 41.22% of the total generated electricity while the demand for electricity is approximately 12,000 megawatt and only 5,493 megawatt is on pipeline. Stated by DESA, the demand for power in Dhaka city has increased by around 10% a year. As the supply is not adequate to meet the demand, so we have to adopt alternative way to solve the crisis. If we consider Thailand, we can see that almost 28% of the electricity demand is met from renewable sources. Bangladesh also has plenty of renewable energy sources -- for innovating and mainstreaming that to the grid.

In Dhaka city we have not enough wind speed for windmill, neither enough river current for hydroelectric power plant nor even any suitable peri-urban places for nuclear power

buildings in Dhaka City. If we consider introducing a 5m2 solar panel for each building, it might produce about 222 megawatt electricity. Another opinion from the same domain says that, we have almost 20,000 shopping malls in Dhaka city where we can introduce renewable energy for electricity generation. Furthermore, the growing real estate companies could also use environment friendly architectural design like Council Building-2 (solar energy capturing building) in Melbourne where a substantial amount of electricity is locally produced for every building. Apart from this, solar technology also can reduce GHG emission rate by absorbing around 20% of solar radiations that might balance the inner city heat.

From renewable energy sources, Bangladesh government has set a target to meet 5% by the year 2015 and 10% by 2020 of total power demand. However, the government has already taken some effective initiatives for enhancing efficiency of electricity use through energy saving bulbs distribution among urban communities. Some government offices, institutions and also other places are now installing solar panels for the purpose of alternative power generation.

Energy is one of the most important ingredients required to alleviate poverty and realise socio-economic development. An energy returned on energy invested policy, banning of profligate uses, increased people

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more compared to rural people. In this situation, global economic wheel may experience a screeching brake leading to inevitable poverty. Indeed, an era of concern has already arrived for the global leaders to think how to overcome this energy crisis?

Now, what is the overview of Bangladesh's energy situation? Currently, around 43% of its population has access to electricity facilities with per capita consumption of 140 kilowatt hour. The electricity consumption rate has increased gradu-

station installation. Nuclear power plant might be a suitable option for bulk amount of power generation and also it has no carbon emission but it is supposed to be risky in terms of earthquake frequency. Surprisingly, Dhaka is situated in the solar radiation receiving zone on the earth with almost 335 sunny days a year. Hence, it seems solar photovoltaic energy generation is the best option for Dhaka city to face the present energy crisis.

According to urban risk reduction specialists, there are 3,26,000 (appx.)

awareness, generation on individual or household level, community or private sector initiative along with investment, zero interest bank loans for renewable energy options and enforcement of law on energy regulation are required to overcome the present and impending power crisis. We need feasibility study on all technologies aiming at electricity production from renewable resources. The need is desperate.

The writers are activist in the areas of climate change and sustainable development.

# Watching Sandy, ignoring climate change



PHOTO: ANDREW BURTON/GETTY.

*Coming as it is just a week before Election Day, Sandy makes the fact that climate change has been entirely ignored during this campaign... In a year of record-breaking temperatures across the U.S., record drought conditions in the country's corn belt, and now a record storm affecting the nation's most populous cities, neither candidate found the issue to be worthy of discussion.*

ELIZABETH KOLBERT

A couple of weeks ago, Munich Re, one of the world's largest reinsurance firms, issued a study titled "Severe Weather in North America." According to the press release that accompanied the report, "Nowhere in the world is the rising number of natural catastrophes more evident than in North America." The number of what Munich Re refers to as "weather-related loss events," and what the rest of us would probably call weather-related disasters, has quintupled over the last three decades. While many factors have contributed to this trend, including an increase in the number of people living in flood-prone areas, the report identified global warming as one of the major culprits: "Climate change particularly affects formation of heat-waves, droughts, intense precipitation events, and in the long run most probably also tropical cyclone intensity."

Munich Re's report was aimed at the firm's clients-- other insurance companies-- and does not make compelling reading for a general audience. But its appearance just two weeks ahead of Hurricane Sandy seems to lend it a peculiarly grisly relevance. Sandy has been called a "superstorm," a "Frankenstorm," a "freakish and unprecedented monster," and possibly "unique in the annals of American weather history." It has

already killed sixty-five people in the Caribbean, and, although it's too early to tell what its full impact will be as it churns up the East Coast, loss estimates are topping six billion dollars.

As with any particular "weather-related loss event," it's impossible to attribute Sandy to climate change. However, it is possible to say that the storm fits the general pattern in North America, and indeed around the world, toward more extreme weather, a pattern that, increasingly, can be attributed to climate change. Just a few weeks before the Munich Re report appeared, scientists at NASA's Goddard Institute for Space Studies, in New York, published a study in the Proceedings of the National Academy of Sciences on the apparent increase in extreme heat waves. Extreme summertime heat, which just a few decades ago affected much less than one per cent of the earth's surface, "now typically covers about 10% of the land area," the paper observed. "It follows that we can state, with a high degree of confidence, that extreme anomalies"-- i.e., heat waves-- "such as those in Texas and Oklahoma in 2011 and Moscow in 2010 were a consequence of global warming because their likelihood in the absence of global warming was exceedingly small." It is worth noting that one of several forces fueling Sandy is much-higher-than-average sea-surface temperatures

along the East Coast.

Coming as it is just a week before Election Day, Sandy makes the fact that climate change has been entirely ignored during this campaign seem all the more grotesque. In a year of record-breaking temperatures across the U.S., record drought conditions in the country's corn belt, and now a record storm affecting the nation's most populous cities, neither candidate found the issue to be worthy of discussion. Pressed about this finally the other day on MTV, President Obama called climate change a "critical issue" that he was "surprised" hadn't come up during any of the debates, a response that was at once completely accurate and totally disingenuous. (As one commentator pointed out, he might have brought up this "critical" issue on his own since "he is the friggin' POTUS.")

It is, at this point, impossible to say what it will take for American politics to catch up to the reality of North American climate change. More super-storms, more heat waves, more multi-billion-dollar "weather-related loss events"? The one thing that can be said is that, whether or not our elected officials choose to acknowledge the obvious, we can expect, "with a high degree of confidence," that all of these are coming.

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# Flood control to save economy

MD. ATIKUR RAHMAN

BANGLADESH is among one of the most natural disaster prone regions of the world. Flood and other natural calamities like cyclones, tornados routinely cause great suffering to people across the country. Government efforts and arrangements are often inadequate to manage these disasters, while NGOs and other private organisations also provide useful service to humanity.

Everybody knows flood is a serious problem for our country. Vast areas fall victim to this flood every year. Suffering of people and other animals beg description. Crops get greatly damaged. Various diseases break out in an epidemic from after flood.

People in northern areas are obviously hit by flood. Powerful natural calamities like cyclones leave the coastal areas ravaged almost annually. In recent times the warning system has improved and probably that will help save lives.

Government should take effective flood control measures to save the economy. A systematic barrage and river dredging network can help reduce the recurring damage. That may be costly but must be much


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less than the loss caused to economy. Government should dredge important riverbeds regularly to maintain increased water flow during monsoon. This must reduce flooding of plains. We think govern-

ment should take more proactive and comprehensive approach to contain the damages by natural calamities.

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1. Sealed tender in foreign currency is invited from bonafide manufacturer/dealer/suppliers/importers (enlisted with DGDP) for supply of the following items for Bangladesh Navy:  

S. No	Name of item	Date of selling		Date of opening	Tender number	Currency
		From	To			
1.	Spare parts for Main Engine (L12-180B) (811MBS) (Qty: 21 L/I)	05-11-2012	17-12-2012	18-12-2012	247.07.129	Foreign

  
2. Tender schedule with detailed specification/condition will be available in this Directorate General on payment as per I/T selling rate (non-refundable) during office hours between 0800 hours to 1300 hours on the abovementioned date of selling. The tender can be dropped in the tender box latest by 1000 hours and the same will be opened at 1005 hours on the specified date of opening in presence of the tenderers (if present).  
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GD-4227  

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For Director General