

We need more specialised engineers!

DR. MD. SHAFIQUIL ISLAM

It is difficult for a developing country with limited energy resources like ours to generate enough electricity to meet the demand. In accordance with the National Energy Policy, the government is following a balanced energy policy to implement the plan of generating 24,000 MWe by 2021 and 39,000 MWe by 2030. To achieve this target, the government wants to reduce the most commonly used natural gas and oil by strengthening coal use, adding LNG and nuclear energy to the fuel mix and boosting the renewable energy sector.

The government is also investing in oil and gas production for the rest of the future energy security. Again, to nourish the energy and power sectors through R&D activities, the government has established the Energy and Power Research Council and Sustainable and Renewable Energy Development Authority. The government is making new laws, policies and regulations to ensure the efficiency, accountability, and transparency of the energy and power sectors and to ensure quality customer service by supplying electricity at an affordable cost. To turn all these efforts into a successful endeavour, however, the first and foremost task will be to develop skilled human resources.

On September 23 during an episode of *Energy Power Talk*, a talk show on ATN, State Minister, Energy and Power said that there were thousands of engineers needed in this booming sector. However, there were no petroleum or mining engineers in the country. He also said that some of the engineers from BIREL, after entering this sector and becoming skilled through acquiring practical knowledge for 4-5 years, do not stay in these organisations because they move abroad. Basically, he was trying to point out that lack of skilled and talented engineers in the energy and power sectors were hampering government's development programmes.

Let us shift our focus to the fresh engineering graduates who are just finishing their university education to be eligible for jobs in this sector. To my knowledge, the public

and the private universities are altogether producing about 13,000 engineers a year. Among them, about 2,500 fresh engineering graduates, e.g., 1,500 in EEE, 600 in mechanical, 300 in chemical and 90 in petroleum and mining engineers are ready to work these sectors. Assuming 10 percent of them will enter into the teaching profession, this leaves only 2,100 available for these 1,500 engineers in the energy and power sectors. Needs to be assessed. A thermal/nuclear power plant with a capacity of 1,000 MWe requires

resources. They too have a demand for skilled manpower. I have not even mentioned the demand in research and private organisations and NGOs. Since there is a shortage, it is not necessary to take appropriate measures to increase the number of seats as needed in the universities for these disciplines and to build appropriate laboratories and infrastructure for quality learning? Despite the opportunity of having higher salaries in the energy and power sectors of both government and private organisations, talented and skilled engineers are still turning their back on this promising and lucrative sector. So

advantage of this reform programme, many non-technical personnel are getting into the board of directors of the newly created generation and distribution companies. Take, for example, the nine member board of directors of the North West Power Distribution Company. The ratio of technical to non-technical personnel here is 3:6. It's easy to see how much the skilled and experienced engineers are being evaluated in taking important decisions. Nowadays, the trend among engineers of going abroad is expected to decrease due to higher salaries and allowances in this sector. But ensuring a

developing skilled manpower. If the policymakers of the energy and power sectors consider the following recommendations, it may be somewhat helpful for skilled HRDs.

The government should give due importance to provide adequate budget for the related academic and research organisations in the same way that it is prioritising the energy and power sectors' growth.

Talented engineers should be recruited; they should be given promotions at the right time according to their qualifications and skills. Experienced engineers should be posted at important positions and given the opportunity to work independently.

Immediately, Bangladesh should be taken to establish the Inauglative Power Sector Management Institute for proper maintenance and skilled operation of more than a hundred fossil fuel and renewable energy based power plants and to facilitate R&D activities. Adequate training should be provided to engineers working in this sector to develop their skills. Retired local and foreign engineers experienced in the operations and management of power plants, professors and researchers expert on energy and power should be recruited as faculties in this institution.

A department on energy-science and engineering should be introduced at every public university. The purpose of teaching this course is to acquire the in-depth knowledge on energy policy, energy law, energy planning, energy diplomacy, energy financing, energy exploration, energy trading, energy management, energy efficiency, energy audits, energy culture, etc. Usually conventional engineering courses (mechanical, electrical, chemical, petroleum and mining) do not address these issues.

Good governance, a corruption free work environment and political stability is ensured, it will not take long for the energy and power sectors to turn around. Uninterrupted power will be ensured at every home. Bangladesh will progress further.



SOURCE: RTI/IMAGE

Although a significant number of private organisations have come forward in the generation of electricity, no one is emphasising on developing skilled manpower.

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Why Economics won't help us today



ANDREW SHENG

As all of us watched the US Presidential debates, I await the outcome of the elections in early November with bated breath. I was struck by how much the world is moving on different planes. Trump and Hillary are trading insults at each other, giving democratic politics a bad name. In the meantime, the Hong Kong Legislative Council members are literally sweating at each other over oath-taking, while Philippine President Duterte called President Obama a name not normally used in polite company.

Attending several serious economics conferences recently, I struck me how mainstream economics is increasingly divorced from helping us to navigate this complex world. Each economist I met presented very complex economic models with lots of equations on why their model explained beautifully why this is going on. But they were all like blind men describing what an elephant looked like by touching different parts of the elephant. They were blind to their own blindness. They were deaf to each other's point of view and simple common sense.

The Hillary versus Trump show says it all. Both are seven-year-old billionaires trying to speak on behalf of 99 percent of the voters who are lucky to accumulate 1 percent of what these candidates earn or own. One husband and his wife and her and her husband (they entered the White House in 1993), everything will move as before - more, more, more military spending. The other says that everything he has been accused of can equally be applied to Bill and that the present system is rigged.

The famous economist John Maynard Keynes, writing in his *Money and Interest* (1936) famously said, "The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of

some defunct economic system." Mainstream economics as taught at many universities is truly defunct. In most natural sciences, such as neuro-science, computing and mathematics, most of what undergraduate graduates learn in three years would be obsolete by the time they graduate because of fast scientific advances.

This is not surprising. It is the embarking of Europe when the population of the Industrial Revolution in 1750 was only 125 million, of which less than 2 percent was educated. In other words, there were probably 2.5 million people then were responsible for the scientific, technological and cultural re-orientation that created Western intellectual dominance.

Today, world population is 7.4 billion of which 3.2 billion or over 40 percent is already using internet, which means that they have access to knowledge and is creating a new global Industrial Revolution.

Scientific knowledge is being created at internet speed, and not just in the rich countries. Many of such new creativity can be found in Asia, such as the silicon valleys in Shenzhen and Bangalore.

In the meantime, the economics profession makes more and more elegant mathematical models based on unrealistic and simplistic assumptions that ignored four key issues that affect us all today - social inequality, climate change, rapid technological change and geopolitical dynamics. Each of these are complicated enough, but they are all inter-related and feedback on each other to make life even more complicated.

Writing in 1933, Keynes had this to say, which eerily echoes the sentiments of today, "The decadent international but individualistic capitalism is in the hands of which we found ourselves after the war is not a success. It is not intelligent. It is not beautiful. It is not just. It is not virtuous. And it does not deliver the goods. In short we dislike it, and we are beginning to despise it. But when we wonder what to put in its place, we are extremely perplexed."

In trying to be a science, mainstream economics focused on mathematical macro-economics and micro-economics, but largely ignored at least two other fields - mezo-economics and meta-economics.

The world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of

nature and other humans. Institutions are the link between the macro broad trends of markets and the micro behaviour of companies and households. Quantitative economists find this field too messy, leaving it to management scientists, sociologists, anthropologists and political science.

But today the main obstacle of not being able to implement economic policy is largely due to the vested interests of conflicting institutions, suffering from bureaucratic infighting, incompetence, outright corruption and not cooperating because these policies conflict with departmental interests.

We can't get anything done because it is almost impossible to arrive at "collective action", meaning that no one is willing to work together to solve our common problems. We can't even agree on what the common problem is.

Every politician, expert or agency claims that if you give them more resources, staff or power, they will solve the problem. But we know more and more about less and less. So if everyone digs deeper and deeper without understanding what they are doing to the system as a whole, the world becomes like a Swiss cheese, with so many holes that the whole has become more fragile.

We are taught by the current individualist creed that individual greed is a public good. That is at best an ideology and at worst an outright lie.

This is where meta-economics comes in. Meta-economics is the study of why economists think the way they think to use a hammer. Their very problem is a nail. An economist trained to look at data only is like a drunk looking for lost keys under the lamp in the dark. He forgot to look for the keys in the dark. Shadow banks are not shadows - they were right in front of all the central banks and regulators to see. They just chose not to see them before the crisis, attributing it elegantly to "radical uncertainty".

We're into the last global crisis with our eyes wide shut. Time to open at least one eye. When economics is no longer common sense, believe common sense, not the expert.

The writer is a distinguished Fellow of the Asia Global Institute at the University of Hong Kong and a member of the UNFPA Advisory Council on Sustainable Finance.

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CROSSWORD BY THOMAS JOSEPH

ACROSS	28 Was aware	2 Wool cap	22 Eoriant
1 Scarecrow	29 Missy	3 Dishes	24 Put stitches
6 November birthstone	30 Agreeable	4 TV's Trebek	25 Four-term president's initials
11 Emperor/serfess	31 Write hastily	5 Tots	27 Wood of film
12 Roulette bet	32 Upper limit	6 Steam swimmer	31 Ply
13 Game leader	33 Toy-filled target	7 "Clusmy" mel	33 Spot for laps
14 Gade a novel	35 Billiards shot	8 Place	34 Breath my bugs
15 Leon Ur's choice	38 Preferences	9 R&D	35 Train unit
17 56	41 Accepted truth	10 Last letter in London	36 Cut dramatically
19 Capture	42 Like xenon	16 Ten-sided figure	37 Car
20 "Survivor" network	43 Come back	17 Particular	39 Remember period
23 Shortly	44 School paper	18 Ridiculous	40 Sow site
25 Worry	DOWN	20 Shore dinner staple	
26 Maughan novel	21 "Twilight" heroine	21 "Twilight" heroine	

YESTERDAY'S ANSWER

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Application Deadline
December 07, 2016, 5:00 pm

Admission Test
December, 09, 2016
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at NSU Campus

For more details, please contact

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