



## Energy Shortages, the Monsoon, India and Pakistan

Posted by [Heading Out](#) on July 25, 2009 - 9:42am

Topic: [Environment/Sustainability](#)

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The international impacts from a lack of sufficient power are often missed when debate swirls about the price of oil and gas, and the need to control emissions as part of an effort to change climate dynamics. There is a site, [Energy Shortage](#), which provides information on the different parts of the world where energy shortages are occurring, both as short-term events, such as the [power outage in Belize](#) over the weekend a week ago, (though with [more forecast](#)) and the longer term problems that I have discussed before with power shortages between demand and supply. This impacts countries such as India which currently has a [gap of between 15,000 and 20,000 MW](#) between what is needed and what is available. Pakistan is currently seeing both problems, a short-term (though now over 48-hours) [blackout in Karachi](#), because of torrential downpours due to the monsoon, and a longer term national shortage of [more than 3,000 MW](#).



*Interactive map corresponding to this image can be found on [Energy Shortage](#) website.*

Part of the problem in this part of the world is that it relies on the rains of the monsoon season to provide hydroelectric power.

Thus far, in India, the monsoon has not been strong, though the converse is the case in Pakistan, as the situation in Karachi demonstrates. There the rain has been sufficient to restart operations at one of the hydroelectric plants, that at Mangla, which is producing 220 MW, and expects to double that in a few days. Overall the national picture has improved over the last year, it being reported that while the overall shortfall was 4,633 MW last year, the drop to the current levels shows a significant improvement. Thus load shedding of 10 – 12 hours last year, has fallen to 8 – 10 hours this year.

But in India the rains are late and have been, until recently, [weak](#).

It has been a heart-breaking June, with the fabled wet wind from the southwest absent in most regions normally on its itinerary. The northern plains are bone dry, with temperatures regularly touching the mid-40s in centigrade. They are the last port of call for the complex, mobile weather system which usually arrives there in July after drenching the vast swathes of peninsular India in June. But the monsoon has not even kept this date, for a number of reasons. . . . . By the end of June, the rains were estimated at 54% below normal levels in these parts, with the deficit reaching 75% in central India . . . . . According to data collected since the 1940s, "normal" is 890 millimeters for the whole season.

The impact on the country is still developing:

After the predictions were made public, the first knee-jerk reaction came from Punjab. The state banned the use of air-conditioners in government offices, boards and corporations - despite the sweltering heat - so eight hours of uninterrupted power could be supplied to the farm sector. . . . The monsoon, which runs from June through September, is such a big thing in India that a bad year has the potential to topple governments. Even now, 60% of Indian farmland is dependent on rains, not irrigation. It goes beyond the economic, the imprint goes into the very socio-cultural make-up of a nation.

It is, however, not only food production that is now threatened:

For instance, the Tehri hydroelectric power station in Uttarakhand supplies power to New Delhi and its hinterland. The water level in its reservoirs has shrunk to dangerously low levels - 741 meters against a normal level of 830 meters during monsoons. The Bhakra dam, the biggest hydroelectric project in northern India, has water flowing in from the mountains. Its reservoir levels remain lower than they were last season.

The problems extend to Bangalore, which is the hub of much of the IT in India, but where the situation is [little better](#):

Monday saw the worst power situation so far since the start of the monsoon in early June. Two hydroelectric power stations stopped generation for a few hours to conserve water and one unit of the thermal power station at Raichur in north Karnataka tripped, plunging many areas in Bangalore and the state into darkness in the evening.

Added to the misery of Bangaloreans was a sudden downpour, accompanied by heavy winds, lightning and thunder which too disrupted connections in many areas of the city.



That heavy rain marked the onset of what many are now hoping will be a regular series of rains that will provide the water that the nation needs. However the rains have come [over a month late](#) and this is a problem since the monsoon provides up to 80% of India's rainfall. The hope is that when the season is over the shortfall may be [as little as 7%](#) of the average, with serious concern only arising if the shortfall rises to 20%.



It is however, not just with rain that the country is beginning to fall short. More than half of India's power generation comes from coal, and the stocks for the power plants are reportedly [down some 50% from normal](#).

NEW DELHI, July 13 (Reuters) - Coal stocks with power plants in India halved from normal levels to 11 million tonnes at July 6, with many thermal plants facing uncomfortable supply positions, junior power minister Bharatsinh Solanki said.

He said 31 power stations had a critical supply condition, having a coal stock of less than 7 days, and of these 10 plants were "supercritical" having a coal stock of less than 4 days.

It is light of this situation that the recent friction reported between Secretary Clinton and the Indian Government must be born in mind. India intends to construct something on the order of 78.7 gigawatts of new power plant in the next five years, much of which will be fueled by coal. The country needs the power, and there is little other than coal that can be expected to meet this demand. As a result there was the [following report](#):

A July 19 event intended to showcase cooperation on clean energy technology at a "green" building outside New Delhi spotlighted the debate. The Indian environment minister said India resents demands from the U.S. for adoption of legally binding caps on carbon emissions.

"There is simply no case for the pressure" considering India produces among the lowest per capita emissions in the world and 500 million of its citizens have no access to commercial energy, Minister Jairam Ramesh told Clinton during a closed-door discussion that a reporter was allowed to observe.

Let us hope that the monsoon brings enough rain that this ends up being a problem that the Indian government does not have to think about in the next three months.



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