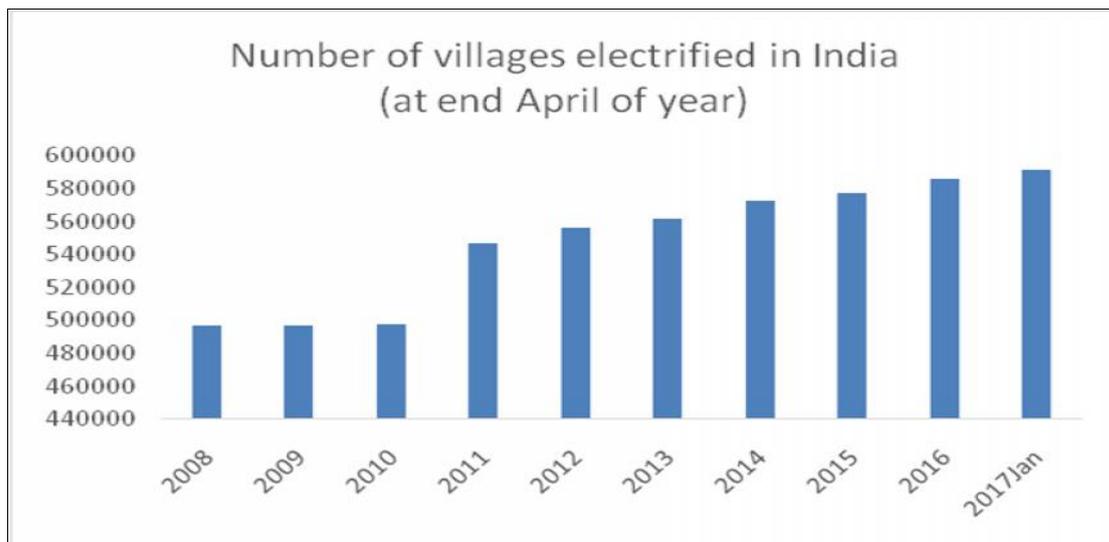


Spreading Light: Are the Modi government's electricity promises being fulfilled?*

C.P. Chandrasekhar and Jayati Ghosh

One of the big promises of the Modi government was that of ensuring electricity for all, and particularly in rural India. In fact, the promise was for reliable power access for all, which formed a major part of Modi's campaign pledges in 2014. This received specific emphasis in last year's Budget Speech, when it was promised that the rural goal would be achieved by March 2017.

On the face of it, this promise seems to be achieved – according to the central government, as of now, 591,685 out of 597,464 census villages (or 99 per cent) have been electrified. This is not as remarkable an achievement as might be thought, because in fact much of this had been done before the tenure of the present government, as Chart 1 indicates. The big push to rural electrification came in 2005 with the launch of the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and then accelerated further in 2010-11, when there was a significant increase in budgetary outlay for this.



True to form, the Modi government has basically renamed the scheme, to Deendayal Upadhyaya Gram Jyoti Yojana, and then sought to take credit for all of it. Since taking power, the Modi government has added another 19,219 villages (or 3.2 per cent of the electrified villages) to this total, thereby bringing it close to the total number of villages.

But even this does not reflect the actual position of access to electricity. Since 2005, a village has been deemed to be electrified if:

- Basic infrastructure such as Distribution Transformer and Distribution lines are provided in the inhabited locality as well as the Dalit basti/hamlet where it exists.
- Electricity is provided to public places like schools, panchayat office, health centres, dispensaries, community centres etc.

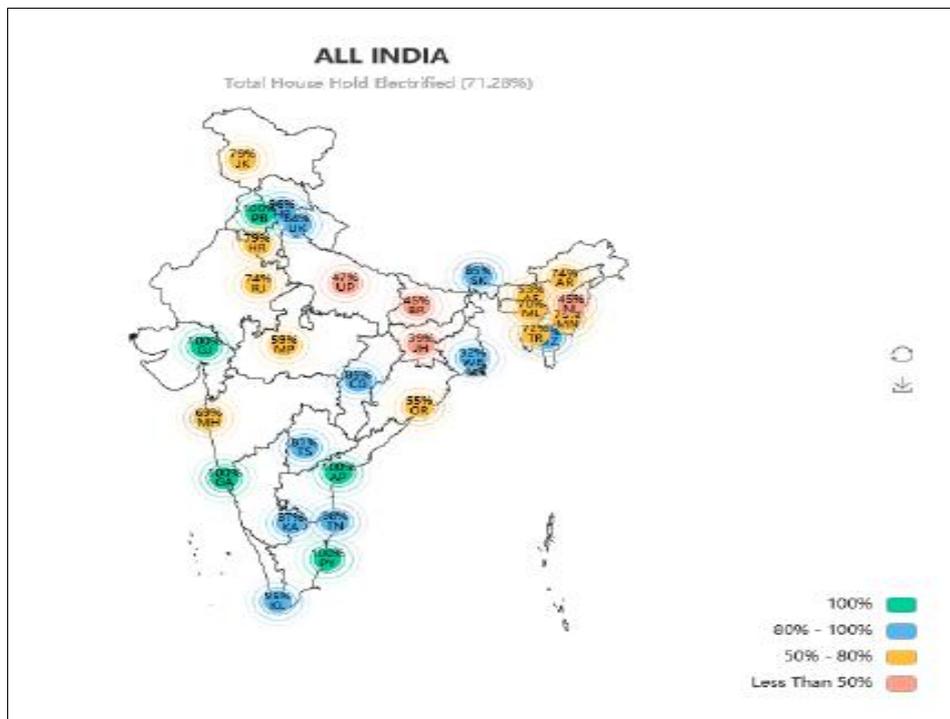
- The number of households electrified is at least 10 per cent of the total number of households in the village.

Note that this requires only the provision of the electricity line to that point, not actual continuous access. It does not account for the regularity or consistency of the power received. So even if a few houses in a village receives only a couple hours of electricity a day for a few days in the year, the village is still deemed to be electrified.

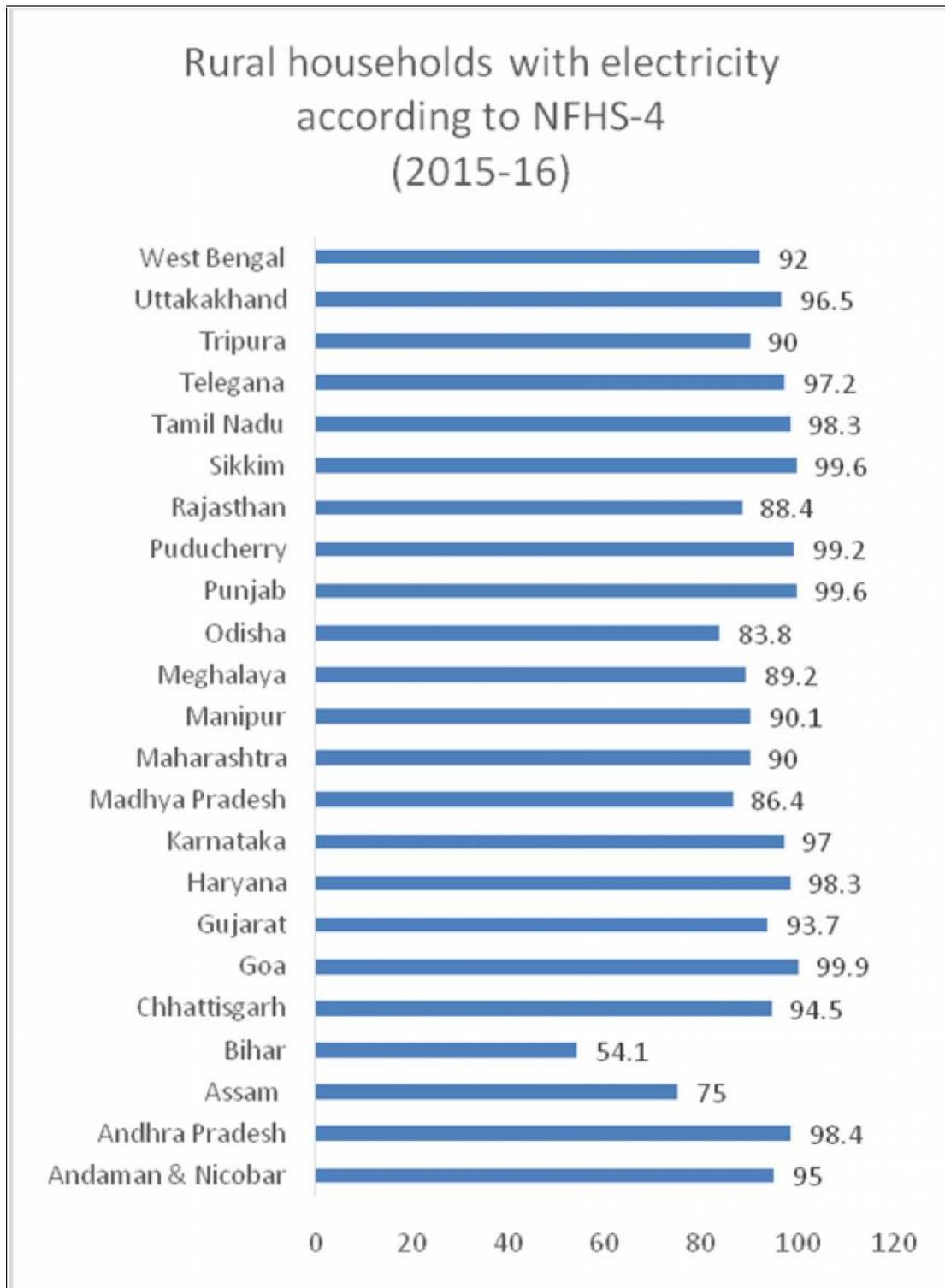
After electrification, therefore, there is the further process that is described as “intensification” by the government, in which individual households are electrified until all households are provided access. As it happens, this process is ongoing in all states and in all villages including those that have been deemed to be electrified for many years, such as in Punjab, Haryana and Maharashtra.

The proportion of households with access to electricity differs significantly from the proportion of villages electrified. The map below (Chart 2) provides evidence on the proportion of households with access to electricity across states. It turns out that only around 71 per cent of all households in the country have electricity (and even this need not be regular or reliable) – but this covers both urban and rural areas. Clearly, rural access would be lower than for urban households, and some have estimated that for India as a whole, only around 60 per cent of rural households have some access to electricity – which means that still two-fifths of rural households do not.

Obviously, there are significant regional variations to this. The latest data from the National Family Health Survey (NFHS-4) carried out in 2015-16 provide some indication of this, even though the data are still not available for some states including populous Uttar Pradesh. (Chart 3) It is evident that, while some states have achieved near-universal electricity access, several still show very large gaps, such as Bihar and Assam.



Source: <http://garv.gov.in/garv2/dashboard#3>



Source: http://rchiips.org/nfhs/factsheet_NFHS-4.shtml#

But is it really the case that even in the apparently more successful states, most households have access to reliable electricity? One way of checking this is by examining the data revealed by satellite imaging technology that captures how much of an area is actually illuminated when it should be at night. A study (described in <https://thewire.in/20050/the-social-realities-of-indias-electrification-in-one-map/>) of

20 years of such data by researchers at the University of Michigan reveals that the official estimates of this are probably over-optimistic.

Consider Andhra Pradesh and Gujarat, which had reportedly achieved 100 per cent electrification of all rural households by 2007. The satellite imagery of lights at night in December 2013 tell a somewhat different story. The image refers to December 2013. In Andhra Pradesh (<http://india.nightlights.io/#/state/andhra-pradesh/2013/12>) while rural areas of Telengana and northern Coastal Andhra do appear bright enough to suggest that electricity coverage is widespread if not universal, the areas of Rayalaseema and southern Coastal Andhra are mostly dark. Similarly, in Gujarat (<http://india.nightlights.io/#/state/gujarat/2013/12>), the districts of Rajkot and Surendranagar appear really dark compared to the brighter lights to the east, even as the easternmost districts of Dohad and Narmada are also much darker than the western coastal areas.

Why is this the case? One likely answer is that having access to electricity or an electricity connection are not enough – both affordability and reliability of the electricity supply are critical, and these are often what is lacking for many rural households.

A 2015 study by the Council for Energy Environment and Water (Access to Clean Cooking Energy and Water; Survey of States, 2015, available at <http://ceew.in/pdf/CEEW-ACCESS-Report-29Sep15.pdf>) surveyed access to electricity in rural areas of six states: Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, West Bengal and Odisha. The survey revealed that in these six states, whatever be the official statistics on electricity access, on the ground the situation is quite shocking. On a scale of 0 to 100, the electricity index across the six states ranged from as low as 8.1 for Bihar to 41.8 for West Bengal.

One particularly startling finding was that, among the households with the lowest level of access (or no access to electricity) around half actually had electricity connections, and therefore were officially classified as households with electricity. The important issues here were the quality of the connection, the reliability of the power and the duration of the supply. It is possible for households with connections not to have received power supply for years, because a burnt transformer has not been fixed, or because the supply to the village or locality is so erratic that it does not amount to meaningful access.

Among the other half of this group that did not even have electricity connections, it was found that two-thirds of them had not taken connections despite having an electricity grid in the vicinity because of perceptions that it would be unaffordable.

All this suggests that the promise of universal access to reliable electricity is still a long way from being met in rural India. These facts should be remembered in case the government now tries to claim credit for electrifying all of village India.

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