# Sustainable Development Goal - 7

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Dear Friends,

This month we shall discuss the seventh Sustainable Development Goal: Affordable and Clean Energy for all.


In this blog, we shall try to explain:

a. What it is and why is this relevant
b. What are its indicators and targets
c. Where do we stand in India
d. What can we do to support the goal

As stated earlier, I have little to contribute on my own. I have attempted to provide a few references, so that if anyone is interested in probing deeper, you could do so.

## What is SDG 7 and why is this relevant [1]

For urban middle class households like mine, when we think of access to energy, electricity comes to the mind first. Therefore, it came as a shock to realize that *access to clean fuel for cooking* is more fundamental for our rural and poorer sections of society, and access to electricity perhaps comes next. Indoor air pollution caused deaths (WHO) are shown below [2]. India, Bangladesh and Myanmar as well as most of Africa has the highest casualty rates.


***Source: https://www.who.int/heli/risks/indoorair/en/***
***Accessed on June 28 2020, 12:20 IST.***

The overall status [1] is noted below.

- 13% of the global population still lacks access to modern electricity.
- 3 billion people rely on wood, coal, charcoal or animal waste for cooking and heating
- Energy is the dominant contributor to climate change, accounting for around 60 per cent of total global greenhouse gas emissions.
- Indoor air pollution from using combustible fuels for household energy caused 4.3 million deaths in 2012, with women and girls accounting for 6 out of every 10 of these.
- The share of renewable energy in final energy consumption has reached 17.5% in 2015.

## What are its indicators and targets? [1]

The indicators for this goal are [3]:

- Proportion of population with access to electricity
- Proportion of population with primary reliance on clean fuels and technology (for cooking)
- Renewable energy shares in the total final energy consumption
- Energy intensity measured in terms of primary energy and GDP
- International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems
- Installed renewable energy-generating capacity in developing countries (in watts per capita)
  https://unstats.un.org/sdgs/indicators/indicators-list/

The corresponding targets are [1]:

**7.1** By 2030, ensure universal access to affordable, reliable and modern energy services

**7.2** By 2030, increase substantially the share of renewable energy in the global energy mix

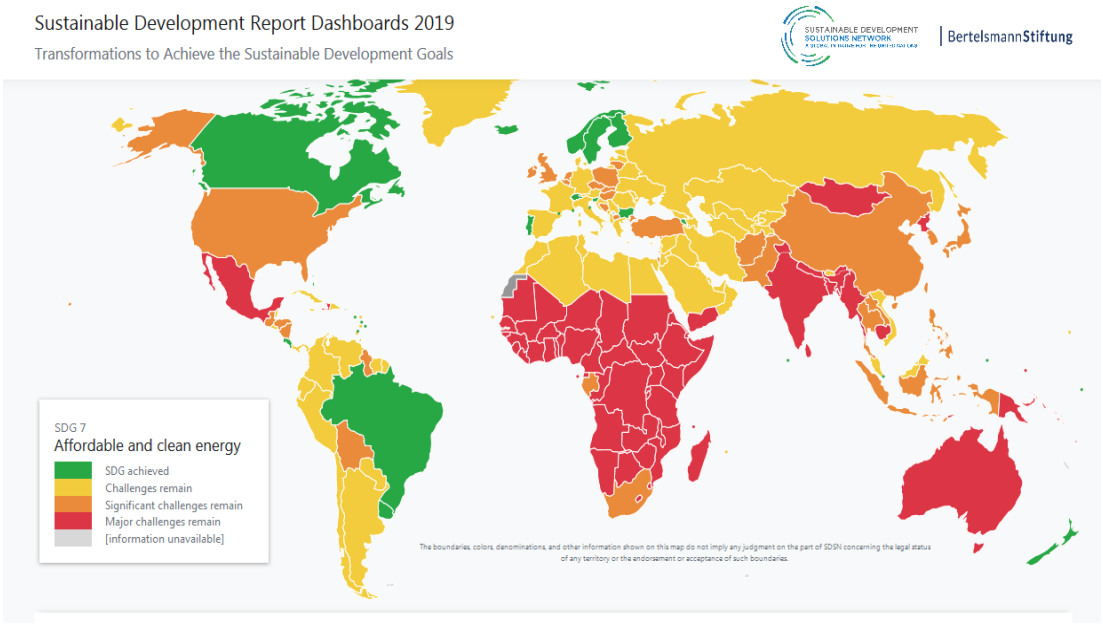
**7.3** By 2030, double the global rate of improvement in energy efficiency

**7.A** By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

**7.B** By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

## Where do we stand in India?

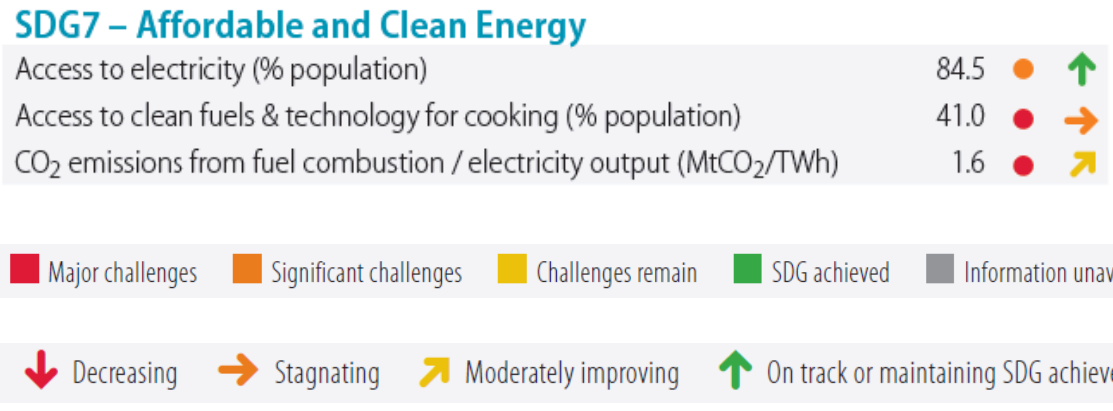
The following images offer some national as well as global status on SDG 7 [4].



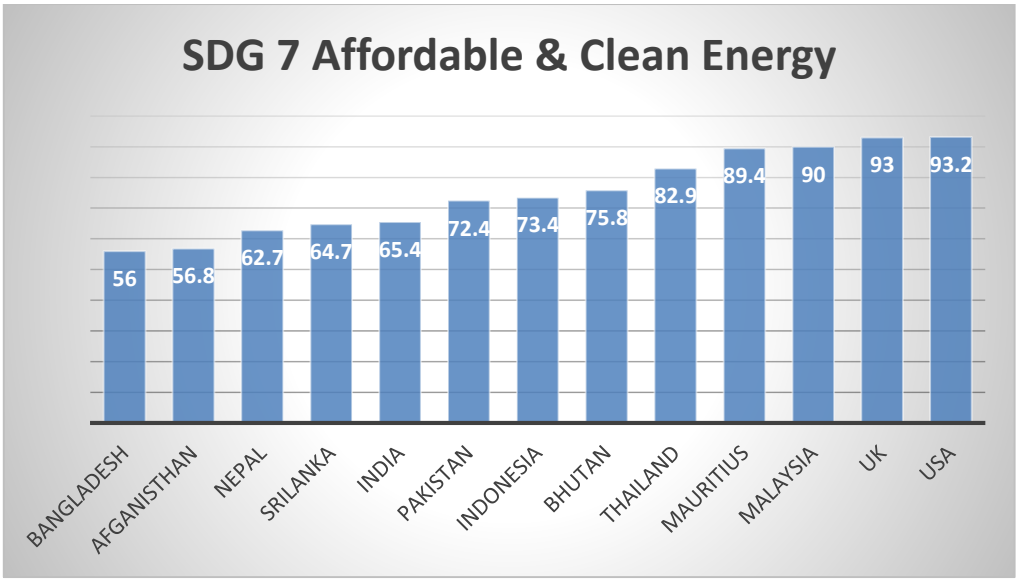

We may note that India, Bangladesh, Myanmar, Australia and major parts of Africa face major challenges in achieving this goal.

At the indicators level, India's position in 2019 was as shown below. Access to clean fuels and technology for cooking appears to be our greatest challenge. Present efforts to provide free cooking gas connections to poor is a right step in this direction.

Specifically, India's standing in 2019 is shown below:




In the following graph we offer a comparison of SAARC nations, 3 ASEAN countries and UK, and USA on the performance on SDG7. India lags behind Pakistan, Bhutan and all ASEAN countries, UK and USA.




If we look at the indicators level, the comparison is shown below [5]:

| Country | Access to electricity (% population) | Dashboard Color sdg7_elecac | Access to clean fuels & technology for cooking (% population) | Dashboard Color sdg7_cleanfuel | CO2 emissions from fuel combustion / electricity output (MtCO2/TWh) | Dashboard Color sdg7_co2twh |
|---|---|---|---|---|---|---|
| Afghanistan | 84.14 | orange | 32.44 | red | | |
| Bangladesh | 75.92 | red | 17.72 | red | 1.28 | orange |
| Bhutan | 100.00 | green | 52.50 | orange | | |
| India | 84.53 | orange | 41.04 | red | 1.57 | red |
| Mauritius | 98.78 | green | 93.34 | green | 1.39 | orange |
| Nepal | 90.70 | yellow | 27.62 | red | 1.64 | red |
| Pakistan | 99.15 | green | 43.32 | red | 1.42 | orange |
| Sri Lanka | 95.59 | yellow | 26.33 | red | 1.53 | red |
| Indonesia | 97.62 | yellow | 58.37 | orange | 2.05 | red |
| Malaysia | 100.00 | green | 96.30 | green | 1.55 | red |
| Thailand | 100.00 | green | 74.43 | yellow | 1.48 | orange |
| United Kingdom | 100.00 | green | 100.00 | green | 1.24 | yellow |
| United States | 100.00 | green | 100.00 | green | 1.20 | yellow |
| China | 100.00 | green | 59.26 | orange | 1.64 | red |

***Source: Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G. (2019): Sustainable Development Report 2019. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).***

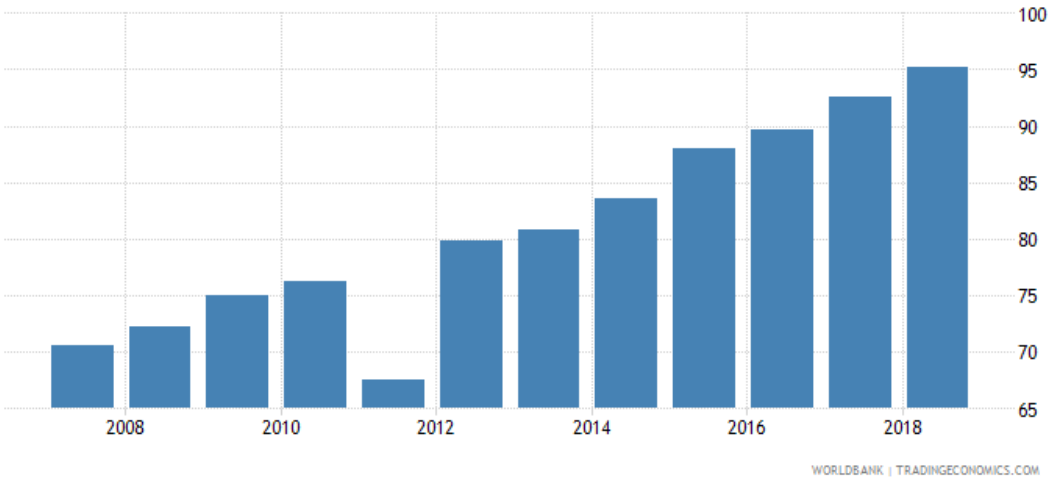
India plans to produce 175 GW of renewable energy by 2022 [6]:
https://sustainabledevelopment.un.org/partnership/?p=34566

More details can be found at [7]:
https://niti.gov.in/writereaddata/files/175-GW-Renewable-Energy.pdf

The country's renewable energy installed capacity has grown to 132 GW as on March 31, 2020, from 75 GW on March 31, 2014, an increase of about 75 per cent. Globally, India stands third in renewable power generation, fourth in wind power and fifth in solar power. At the Climate Action Summit hosted by the UN Secretary General in September 2019, Prime Minister Modi reiterated India's commitment to climate action with a more aggressive renewable energy target of 450 GW by 2030. India has already made the global pledge, as part of its Nationally Determined Contributions, to have 40 per cent of its cumulative electric power installed capacity from non-fossil fuel sources, which currently stands at 35.86 per cent.

Several programmes are implemented to facilitate access to clean cooking energy. The National Biogas and Manure Management Programme aims at setting up family type biogas plants in rural areas for providing biogas as a clean cooking fuel and a source of lighting. The programme was launched to improve women's health, reduce pressure on forests, improve sanitation and accentuate social benefits. The Pradhan Mantri Ujjwala Yojana was launched as a flagship programme in 2015 to combat the dependence on biomass for cooking, improve women's health and empower them with asset ownership. The program has already achieved its target of enabling 80 million households to access LPG for cooking in September 2019, well ahead of time [8].
***Source:***https://sustainabledevelopment.un.org/content/documents/26281VNR_2020_India_Report.pdf

Access to electricity (% of population) in India was reported at 95.24 % in 2018, according to the World Bank collection of development indicators, compiled from officially recognized sources [9]. India - Access to electricity (% of population) - actual values, historical data, forecasts and projections were sourced from the World Bank on June of 2020. This would put India in 'Yellow' category in the chart above.




***Source: https://tradingeconomics.com/india/access-to-electricity-percent-of-population-wb-data.html***
***Accessed on June 30, 2020 14:55 IST***

## What can we do to support the goal? [10]

Basically, there are two approaches for the individual human being: 1. Try to switch over to renewable sources as best as possible, and 2. Try to reduce the consumption of fossil based energy as much as possible. The Lazy Person's Guide to Saving the World https://www.un.org/sustainabledevelopment/takeaction/ offers 4 levels at which you could contribute: 1. Things you can do from your couch, 2. Things you can do at home, 3. Things you can do outside your house and 4. Things you can do at work.

Here are some examples relevant for this goal for each level:
***Level 1*** **-** Save electricity by plugging appliances into a power strip and turning them off completely when not in use, including your computer.
***Level 2*** **-** Air dry. Let your hair and clothes dry naturally instead of running a machine. If you do wash your clothes, make sure the load is full.
***Level 3*** **-** Shop local. Supporting neighbourhood businesses keeps people employed and helps prevent trucks from driving far distances.
***Level 4*** **-** Bike, walk or take public transport to work. Save the car trips for when you've got a big group.

In addition, try to propagate the basic ideas of sustainable development to your friends, relatives and all others as best as you can. In particular, try and create awareness of 3 major areas of concern: global warming, bio-diversity loss and excessive use of chemical fertilisers leading to nitrogen loading of all water bodies, killing marine lives.

## References


1. https://www.un.org/sustainabledevelopment/energy/ Accessed on June 28 2020 10:42 IST
2. https://www.who.int/heli/risks/indoorair/en/ Accessed on June 28 2020, 12:20 IST.
3. https://unstats.un.org/sdgs/indicators/indicators-list/
4. SDG Index Dashboard https://dashboards.sdgindex.org/#/IND Accessed on May 28 2020 11:10 IST
5. Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G. (2019): Sustainable Development Report 2019. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).
6. https://sustainabledevelopment.un.org/partnership/?p=34566
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9. https://tradingeconomics.com/india/access-to-electricity-percent-of-population-wb-data.html. Accessed on June 30, 2020 14:55 IST
10. https://www.un.org/sustainabledevelopment/takeaction/
11. India_SDR_2019.pdf downloaded from: https://github.com/sdsna/2019GlobalIndex/blob/master/2019GlobalIndexIndicatorProfiles.pdf