

# [Energy first time sdgs included a target](https://assignbuster.com/energy-first-time-sdgs-included-a-target/)

Energyaccess is the “ golden thread” that weaves together economic growth, humandevelopment and environmental sustainability. The International Energy Agency (IEA) defines energy access as “ ahousehold having reliable and affordable access to both clean cookingfacilities and to electricity, which is enough to supply a basic bundle ofenergy services initially, and then an increasing level of electricity overtime to reach the regional average” (IEA 2017). The United Nations General Assembly in 2012 embraced the SustainableEnergy for All (SEforALL) objectives for 2030, aiming to achieve universal accessto modern energy, doubling the historic rate of improvement of energyefficiency and double the share of renewable energy in the global energy mix (IEA 2017). Energy access isa major factor in economic and social development. Energy is a necessary inputalong with machinery, land, natural resources, human capital in the productivebase of the economy (Winkler, Simões et al.

2011) . Asenergy access is the great enabler for development at different levels of thesociety, it is a vital tool for developing countries to meet the SustainableDevelopment Goals. In September 2015, 193 countries including developing anddeveloped countries adopted 17 new Sustainable Development Goals as the 2030agenda for Sustainable Development. With the aim to eradicate poverty, improvehealth and gender equality, protecting planet and ensuring peace and prosperityfor all. Along with that, for the first time SDGs included a target focusedspecifically on ensuring access to affordable, reliable and modern energy forall by 2030, also considering importance of energy to achieve other developmentgoals (IEA 2017).     Themain hurdle to achieve all the sustainable development goals is poverty, notonly in the developing countries but as a global perspective.

There is noabsolute definition of poverty, but low attainment of social condition forexample education, health and nutrition along with economic deprivation cannarrow it down to some extent. One way to cope with this multi-dimensional problem, i. e. poverty, is by promoting the access to modern energy such as electricity (Kanagawa and Nakata 2008) .  Among all the modern forms of energyElectrical Energy is the most advanced form and access to electrical energy canbring significant changes in the standard of living of the people in thedeveloping countries.  (Kanagawa and Nakata 2008), in Figure 1 have shown link between energyand some basic parameter of poverty. Education ·         Lighting appliances enables to study at night.

·         Utilization of modern energy results in freeing up from drudgery and creating time for study. ·         Electricity helps narrow the digital divide through Information Communication technologies (ICT)   Health ·         Using modern forms of energy reduces exposure to hazardous pollutant. ·         Avoiding drudgery such as collecting fuelwood improves health condition of, in particular women and children. ·         Access to electricity enables vaccination and medicine storage by a refrigerator.          Environment ·         Reduction in use of fuelwood pretends deforestation.

·         Use of efficient electric appliances saves energy consumption. ·         Appliance of renewable energy promotes climate protection Income ·         Enterprise development through electrification creates job opportunities. ·         Mechanization in industry achieves higher productivity.

·         Small-scale energy system in rural areas generates local industry Energyy          Figure 1 : Links between energyand components of povertyAccessto modern energy not only provides economic opportunities for income generationbut also reduce the drudgery and saves time, which can be utilized foreducational or different entertainment activities. Considering electricity asthe pivotal form of modern energy, electricity consumption has significantcorrelation with Gross Domestic Product (GDP) as well as Human DevelopmentIndex (HDI). For the countries having high energy consumption level per capita electricity, attain high rank in economic activities like GDP and also in HDI (Kanagawa and Nakata 2008). Globalelectrification stands around 85. 3% and varies widely across the continents. However Urban areas across the world already have close to universal access at96 %, whereas progress in rural electrification has been more evident since1990, reaching 73% of the population in 2014, narrowing the gap in accessbetween the urban and rural populations to 20 percentage points, from 35 in1990. But still 1. 06 Billon people do not have access to electricity (IEA 2017).

1. 1 CurrentSituation in NepalNepallies between latitude 26°22′ N to 30°27′ N and Longitude 80° 12′ E, with borderfrom India in the South, East and West and China from the North (CBS 2011). According toCentral Bureau of Statistics, Nepal has a population of 26.

4 million with 5. 4million households. Nepal is ecologically divided into three regions, theMountain, the Hill and the Terai (Plains) (CBS 2011). Mountainregion: the region lies in North covered with mountainous areas. The altituderanges from 4877meters to 8848 meters above the sea level. Because of itsgeography and climatic condition, it is mostly thinly populated with only 6. 73percent of the total population (CBS 2011). Hillregion: Hill region is between Mountain and Terai regions, ranges from thealtitude of 610 meters above the sea level.

This region shares largest share ofthe land area and it is home to 43. 2 percent of total population (CBS 2011). TeraiRegion: The low flat land in the southern part of the country is Terai. Itaccommodates 50. 27 percent of the population. The population in this reason isincreasing faster as compared to other two regions, one of the major reason isinternal migration (CBS 2011).

Nepalwith a population of 28 million and GDP per capita ($US) 730 has 85% access tothe electricity with only 26% having access to clean cooking. The urbanelectrification rate is around 97. 7%, similarly rural electrification rate lags around by 16% which isamounted to be 81. 70% (IEA 2017). Nepal has achieved considerableprogress in rural electrification in last two decades. According to thereports, Nepal has annual access growth rate above 2 percentage points, whichis more encouraging and rapid compared to other developing countries (IEA 2017) .

Moreover, the un-electrified areas are therural hilly and mountainous regions, and one of the main reason is that theyare geographically challenging places. And most importantly, lack of economicallyviable options for electricity generation. Asmentioned above, access to modern energy as the thread to all other SustainableDevelopment Goals, it provides opportunities for education, health, employmentand helps to minimise the drudgery. Nepal being one of the least developedcountries of the world with a vision to reach middle income country category by2030 (NPC 2016), access tomodern energy should be kept on high priority to achieve the target. Accordingto the CBS(2011), more than 80% of the people live in rural area, so it becomes pretty evidentfrom this fact that rural energy access will have major stake in achieving thefuture SDGs.

Currently, most of the household in rural areas have access to theoff-grid technology like micro hydro, solar home system and biomass. Since, theelectrical energy from the off-grid source is limited and it is mostly used forlighting, using television and mobile charging, it is very difficult to utilizethat power for any further economic activities. Inlast decade, Nepal showed leapfrogging in terms of poverty alleviation, one ofthe main reason is remittance.

Remittance contributes around 30% of the GDP, which is second highest among the countries having population more than 1million(Cosic 2017). It hasresulted growth in consumption and also in purchasing power of the householdsin the rural areas. Simultaneously, the energy sector has not revived itselfaccording to the needs of the people. The energy needs of the households areincreasing every day and limitation to the energy is considered as the barrierto the required standard of living. Therefore, its urgent to upgrade the energyaccess and improve the electrical energy availability, power supply quality andaffordability to meet the modern energy demands.

The demand of energy and its accessis dependent on various other factors like, household economy, household size, education, income, economic activities, gender etc. Therefore, it is importantto know the relationship between these different factors and their effect onthe energy demand. This thesis helps to learn about the connections between thedifferent variables effecting energy consumption, estimate the energy need ofthe rural household, where the national grid is not available. In recent times, most of the research is focused on urban energy utilization, very less researchhas been done in terms of rural energy demand. With the aim to reach strand ofmiddle income countries it is necessary to do energy planning for the ruralhouseholds, so that they get access to sufficient modern energy supply.