Access to affordable energy is essential for reaching any development goals. The IAEA helps Member States using or introducing nuclear power to do so not only safely, securely and economically, but also in an environmentally friendly manner. By verifying that nuclear energy is used only for peaceful purposes, it directly contributes to international peace and security.

To meet the needs of a growing population, global energy demand is projected to grow by one third over the next 25 years.

More than 1.3 billion people worldwide live without access to electricity and at least 2.7 billion people live without clean cooking facilities, a leading cause of indoor air pollution.

Access to affordable, safe and reliable energy services is essential to achieve the Millennium Development Goals and has a direct impact on health, education, employment, human welfare and poverty eradication.

Electricity generation produces about two-fifths of global energy-related CO2 emissions. Nuclear power produces virtually no greenhouse gas (GHG) emissions during electricity generation. It is also among the lowest in CO2 emissions, along with hydro and wind power, throughout its life cycle.

Nine out of ten people in Africa have no access to electricity and rely on biomass like firewood, agricultural residues, animal waste and charcoal for their energy. Wood fuel use is a primary cause of deforestation.

Throughout their life cycle, all electricity generation forms produce waste.

The IAEA is helping over 80 countries worldwide, including over 30 African nations, to plan their national energy strategies. The IAEA assists countries to evaluate their energy supply and demand and to make their own educated decisions about future electricity supply. This builds Member States’ capacity to plan their future energy needs.

The IAEA helps countries to introduce nuclear power responsibly, sustainably and safely.

The IAEA facilitates research in advanced nuclear technology and fuel cycles for electricity generation, including fast reactors and nuclear fusion.

Nuclear energy can deliver reliable low-carbon electricity at stable prices for decades and can significantly enhance the energy security of countries that include it in their energy mix.

Nuclear energy emits few pollutants or GHGs. It has the largest potential to mitigate GHG emissions in electricity generation at the lowest cost.

The IAEA promotes the safe management of radioactive waste generated by the use of nuclear power. The objective of waste management is to protect people and the environment, now and in the future.