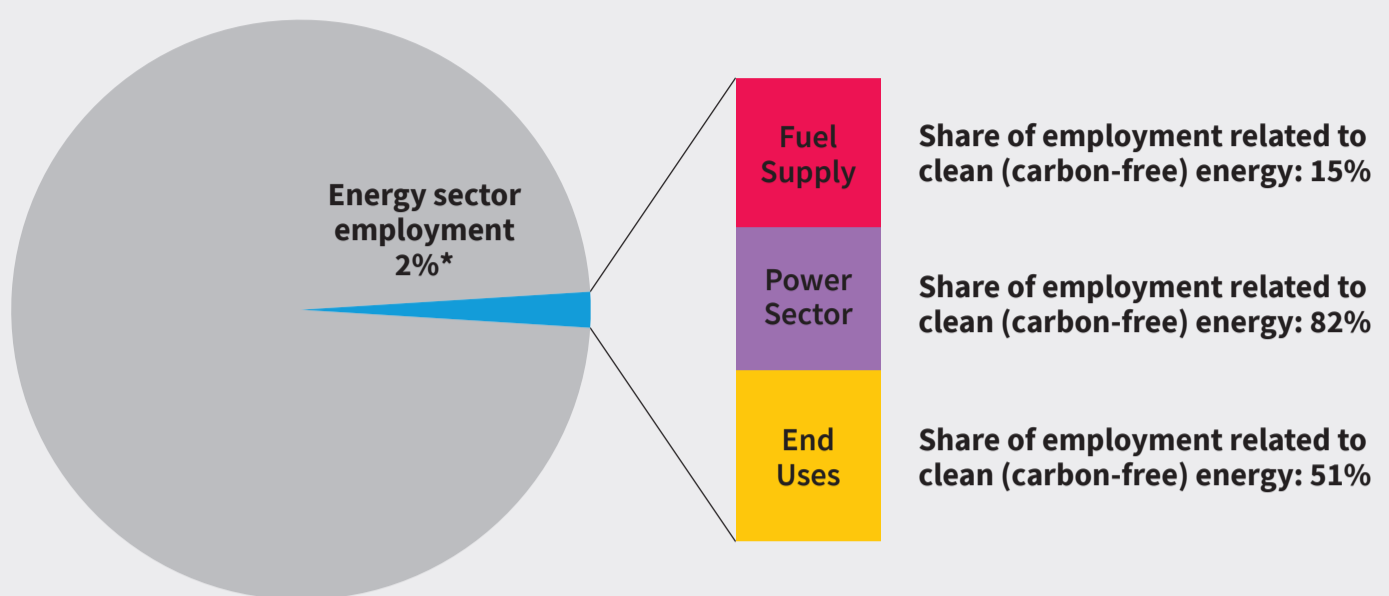


According to the International Energy Agency (IEA), the energy sector employed 65 million people and constituted 2% of global employment in 2019.

**Energy Sector Share in Global Employment (2019)**



Following the Covid crisis, most of the employment increase was in clean energy related areas, and the estimated clean energy related employment share in the energy sector went up to 51% in 2022 compared to 49% in 2019.

**Fuel Supply:** Employment in the exploration, investment\*\*, production, distribution, operations and maintenance/repair stages of coal, oil, gas and bioenergy fuels.

**Power Sector:** Employment in the investment\*\*, operations, and maintenance/repair in the generation, transmission and distribution of electricity.

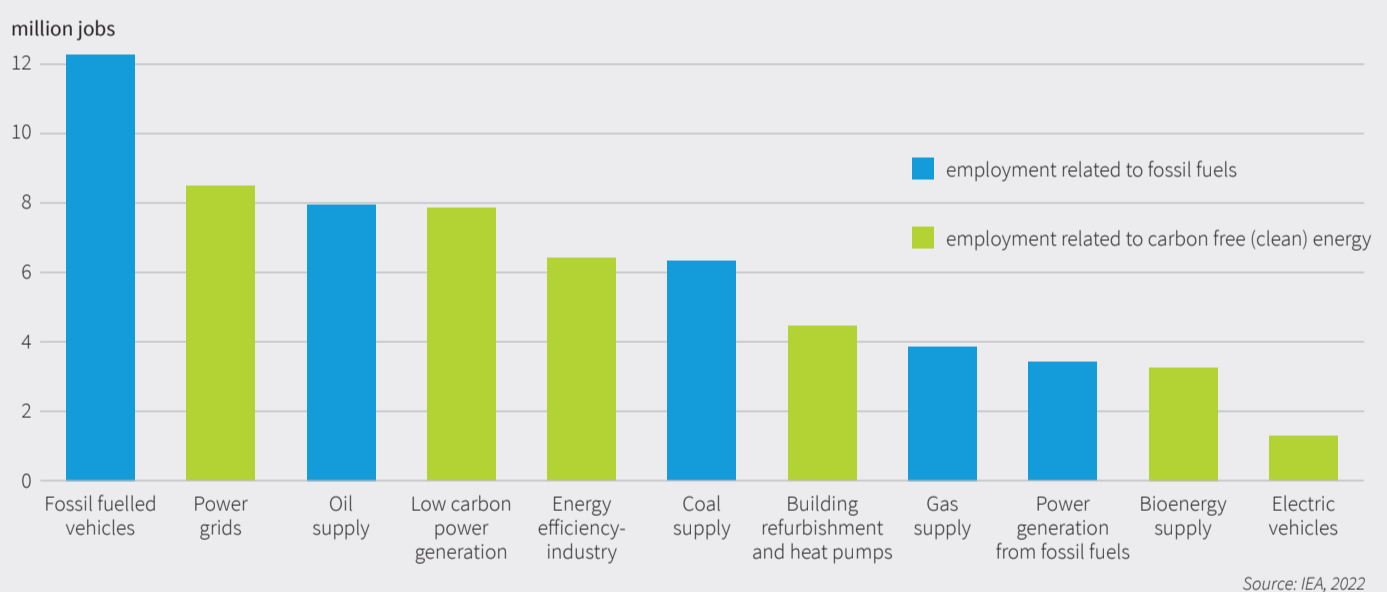
**End Uses:** Employment related to energy efficiency, and production of fossil fuelled and electric vehicles and their batteries.

\*The figure includes direct employment in the energy sector and indirect employment in sectors that are primarily related. Employment induced in sectors (such as, iron and steel, fabricated metals, education and other services, etc.) through secondary effects are not included.  
\*\*Employment in the investment stage covers manufacturing of energy equipment. Employment related to energy storage is included in the transmission sector employment.

Source: IEA (2022)

Assessment of subsectors reveals that the employment in carbon-free energy production and energy efficiency exceeds that in fossil fuel supply and power generation from fossil fuels. On the other hand, employment in the production of electric vehicles and their batteries is only 1/8 the level of employment in fossil fuelled (ICE) vehicles. However, with new investments, employment related to electric vehicles is expected to increase.

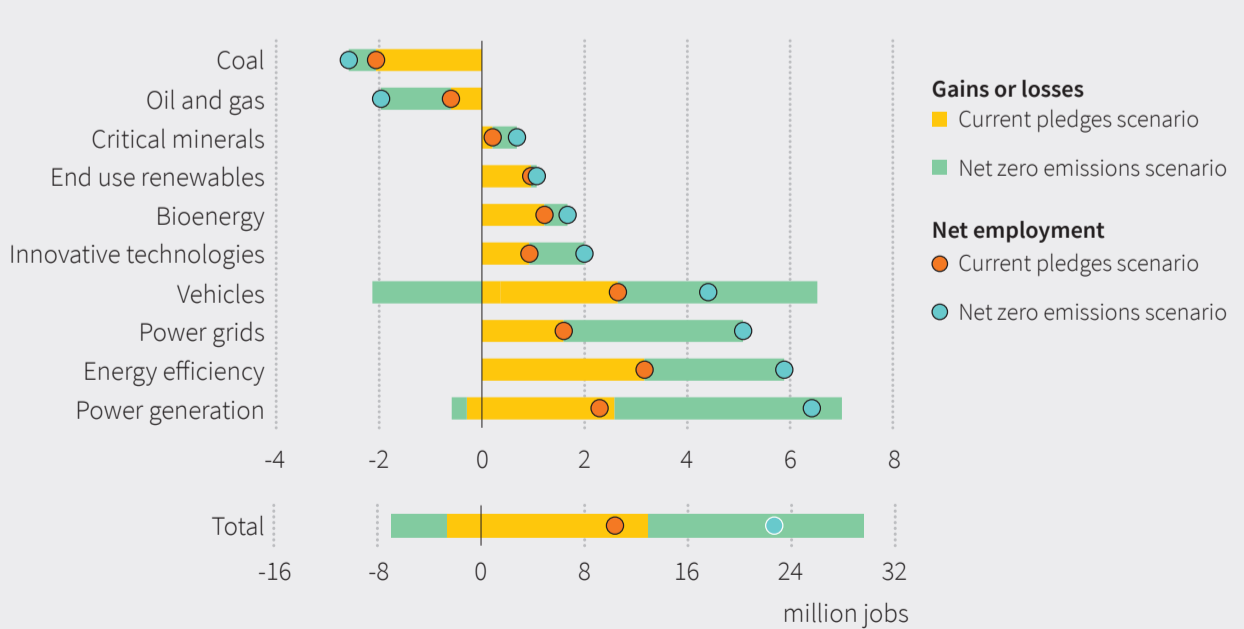
**Employment in Energy-Related Subsectors (2019)**



Source: IEA, 2022

Changes in the structure of energy employment are expected with the acceleration of the energy transition in line with net zero emissions targets. According to projections by IEA, in the net zero emissions by 2050 scenario, estimated gains in employment are 30 million while losses are 6 million by 2030. Electric vehicles, energy efficiency, renewable energy and power grids emerge as the subsectors with the largest employment potential.

**Change in employment by scenarios (2019-2030)**



Source: IEA, 2022

- Since employment generated in the energy sector is mostly in equipment manufacturing, investment, installation and maintenance/repair stages, new investments related to net-zero emissions targets is expected to trigger an increase in total employment.
- New employment opportunities created by the energy transition will not only offset the losses, but will create significant net employment.
- For a just energy transition, it will be crucial to protect the rights of workers currently employed in fossil fuel sectors, facilitate their transitioning to new jobs and to ensure that the clean energy employment created is of sufficient quality with regard to income, job security and worker safety.