

THE ROLE OF FUSION ENERGY IN THE FUTURE

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Overview

Nuclear fusion is known as the energy of the future. The amount of energy obtained per gram of fuel (hydrogen) and the fact that hydrogen is virtually infinite, provide fusion with the potential to totally change the way in which energy production is conceived. The availability of fusion energy will not only change the economy in relation to energy sustainability, but the world as an integration of society. Fusion energy has various advantages in comparison with traditional energy sources, renewable energy sources and even standard nuclear energy (which is obtained by fission processes). Fusion is expected to become the cheapest and cleanest energy source in relatively short time after it is achieved [1]. Finally, some of the difficulties that must be solved to reach fusion energy production are reviewed.

Methods

This work is a bibliographical review of what has been done in the study of the economic aspect of fusion energy as well as the expectancies for fusion in the next century. Various papers were reviewed, both with technical and economic perspectives.

Results

Even though the real impact of fusion energy can only be measured once the first reactor is built, there is a good chance for fusion to become the cleanest and more profitable energy source. Its capacity to replace fossil fuels as the world's main energy source, makes fusion a game-changer in the global economy. Some of the identified advantages are its capability of delivering sustainable and abundant energy, the low risks it represents and the expectancy of reaching a low cost in a short term [2]. Also, fusion will be a more reliable energy source than other renewables as Eolic o solar energy. The main challenges to overcome are of the technical kind and can be easily solved with proper founding.

Conclusions

Fusion will play an essential role in the world's future. It is a key part of the fight against climate change and will solve the humankind energy problems virtually forever. It will represent an affordable and cost-effective energy source that will light the future of humanity.

References

- [1] S. Entler, J. Horacek, T. Dlouhy, V. Dostal. Approximation of the economy of fusion energy. Energy, 2018.
- [2] <https://www.iter.org/sci/Fusion>