

Renewable Energy and Its Applications Around the World

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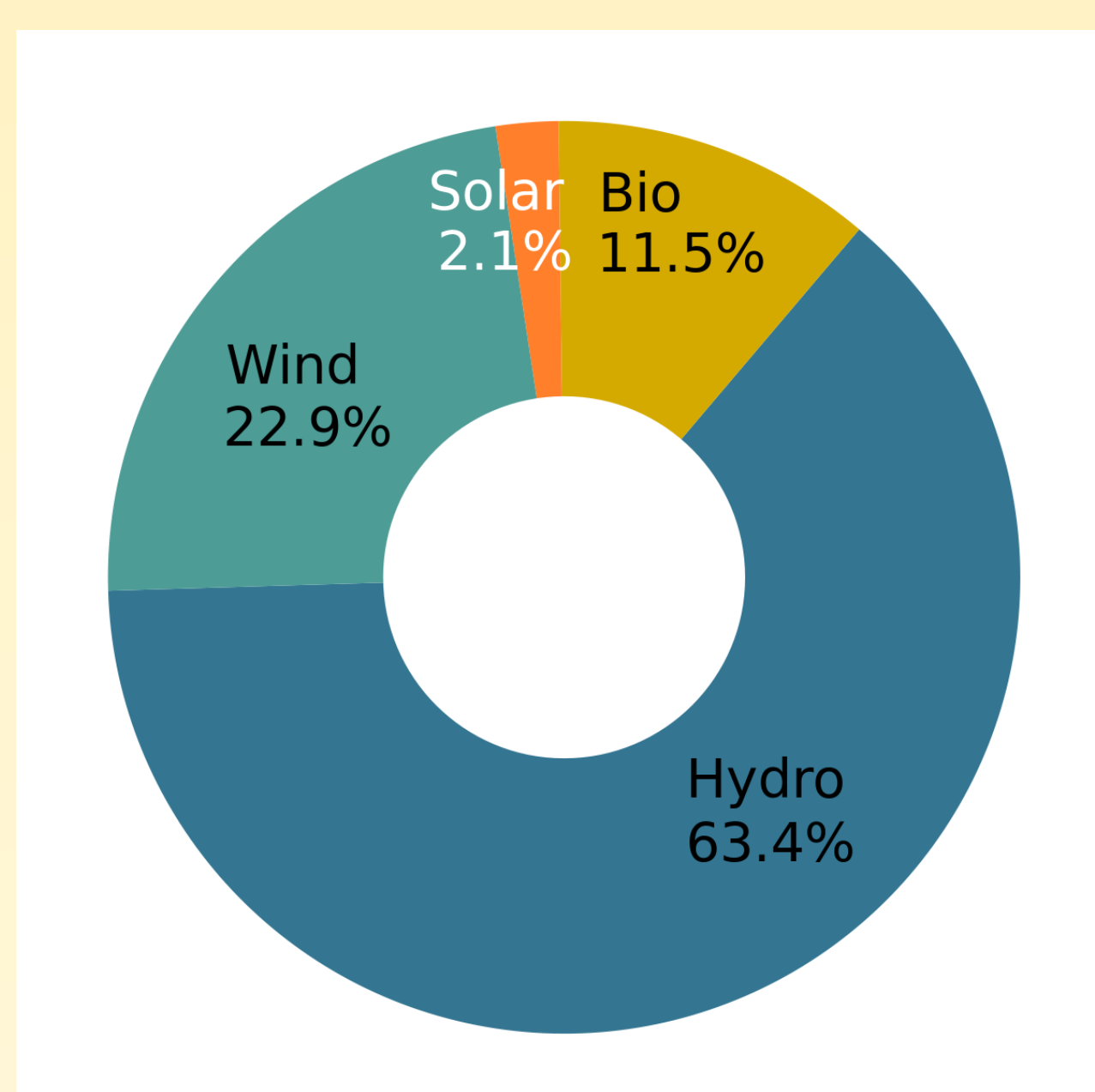
Abstract

Energy is the main and most inclusive measure of all the wide ranges of work done by humans and machines. Renewable energies such as solar, hydro, wind and so forth have become crucial since they neither create any pollution nor require imported fuel. For achieving growth and progress in developing countries, the utilization of available energy sources is important. Renewable energy can be cost-efficient and socially more beneficial. This research provides us a look into how some countries in Africa, Europe, Asia, and Australia take advantage of renewable energy sources and explore its vast possibilities. Finding alternative energy sources that reduce costs and compete with fossil fuels; the study will look into the dynamics of the competitive transition and what these countries are innovating to make sustainable energy strong.

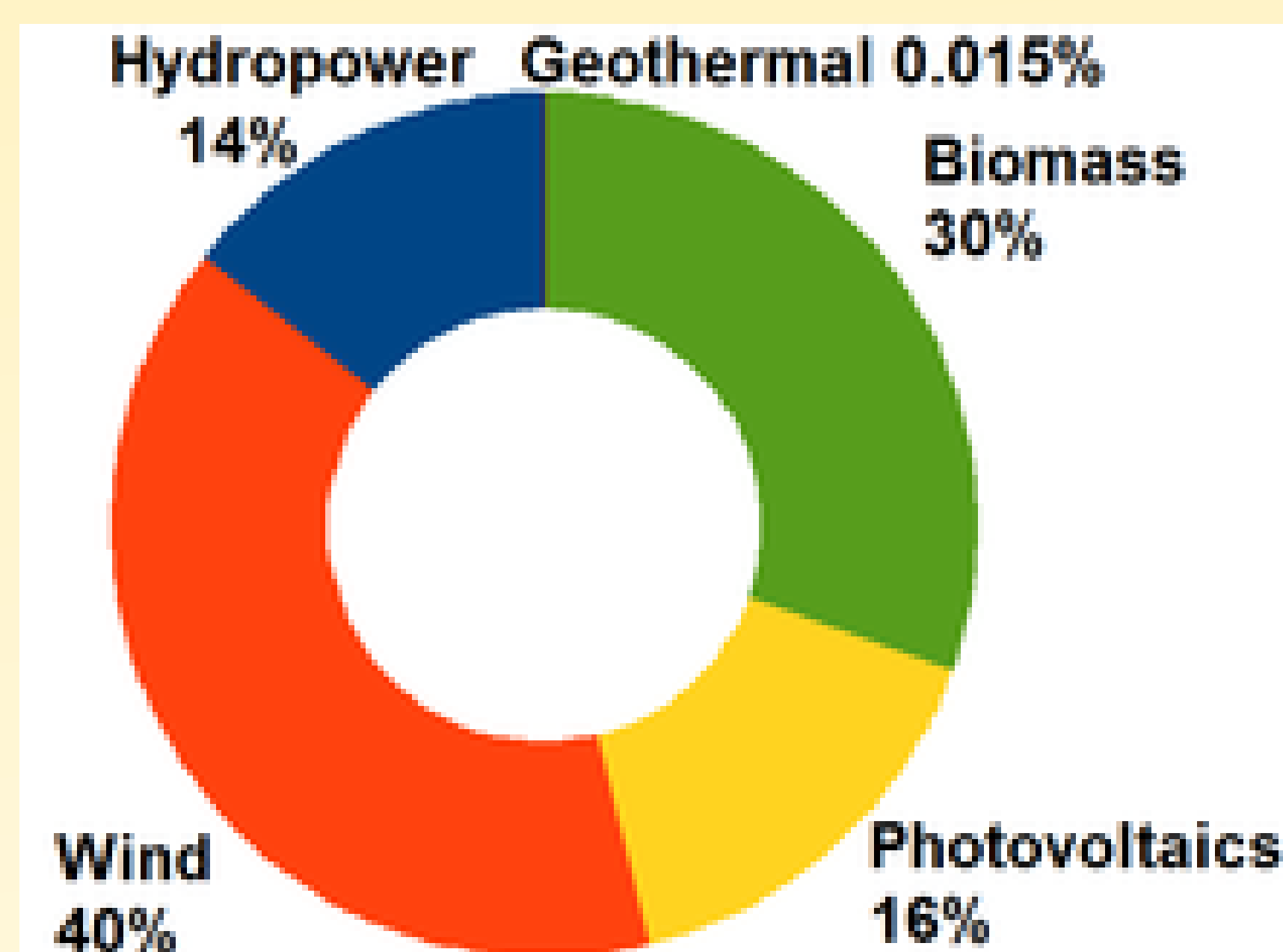
Methodology

Renewable energy is something that has been researched for many years, therefore this was just a lot of reading and seeing other peoples work and putting the “why” into why renewable energy is something that many countries should use even more than they do. Focusing on countries such as Germany, South Africa, and Australia where they have put the renewable energy in a whole different perspective was very interesting.

Renewable Energy in Australia



Renewable Energy in Germany



Australia's Victoria state adds six new wind and solar farms to help meet a target of getting 25 percent of its power from renewables by 2020



Results

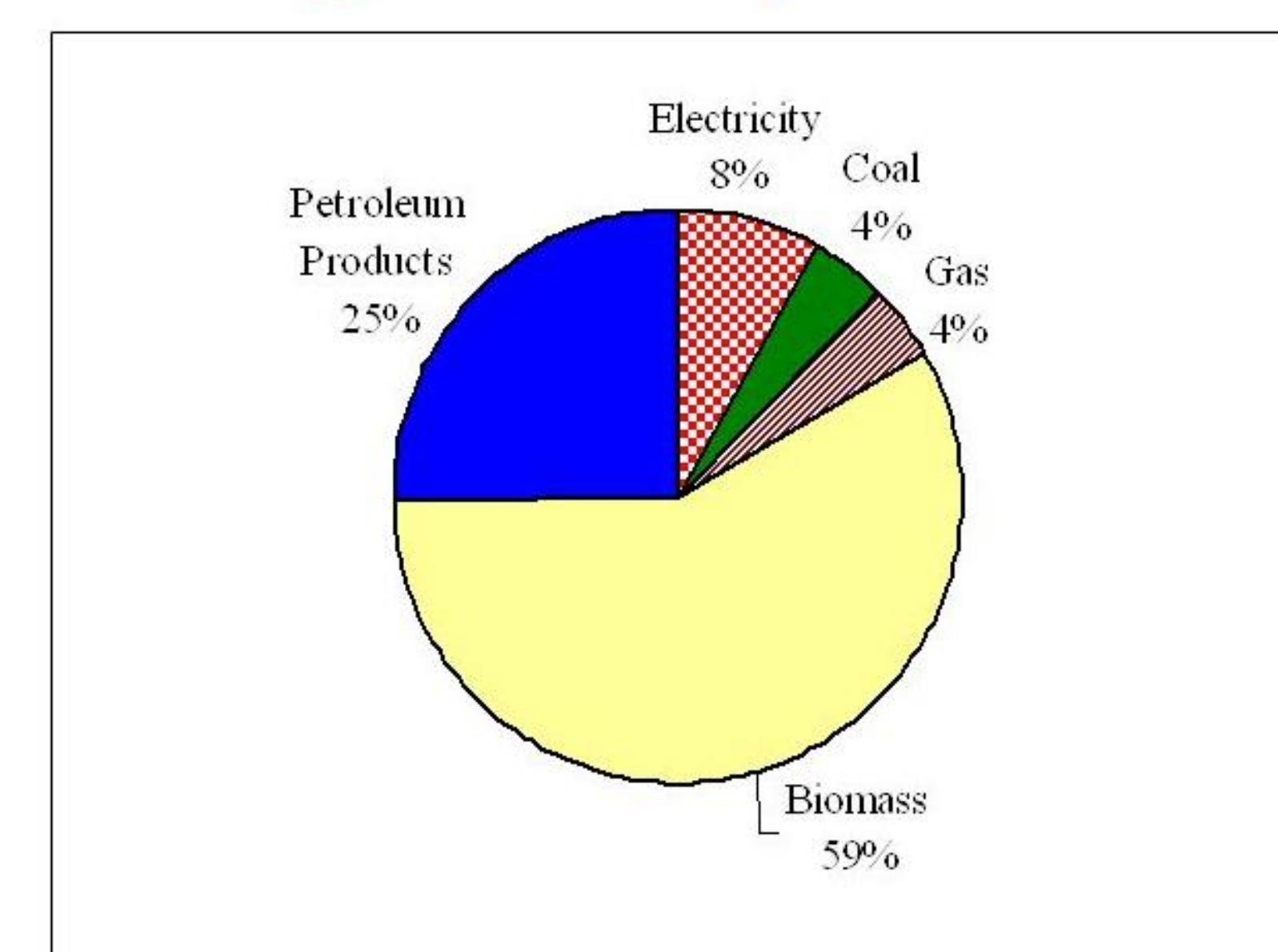
In 2004, investment in the renewable energy sector reached \$30 billion U.S. in Africa alone.

Investment of more than \$5.5 billion in 2012, up from \$30 million in 2011

Wind energy attracted \$1.1 billion of investment South Africa was the ninth-leading destination for clean energy investment among Group of 20 (G-20) of the world's developed and emerging economies

Wind energy capacity grew from 4.5 MW in 2003 to 100 MW (under construction) and 1984 MW (commissioned) by 2014 The fourth fastest growing market for RE by percentage of GDP (2012) – *REN 21 Global Status Report*

Energy Consumption in Africa



* Biomass refers to combustible renewables (mainly fuelwood, charcoal and agro-residues) and waste
Source: IEA, 2005

Conclusion

The increasing global demand for energy security and sustainable development necessitated the need for a paradigm shift from fossil fuel energy sources to renewable sources. Many countries can really benefit from renewable energy sources, and they've already gotten a jump start to it and in the near future.

Kenya, Africa Solar Panel Energy Project with women



Acknowledgements

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