

Nuclear Energy Policy

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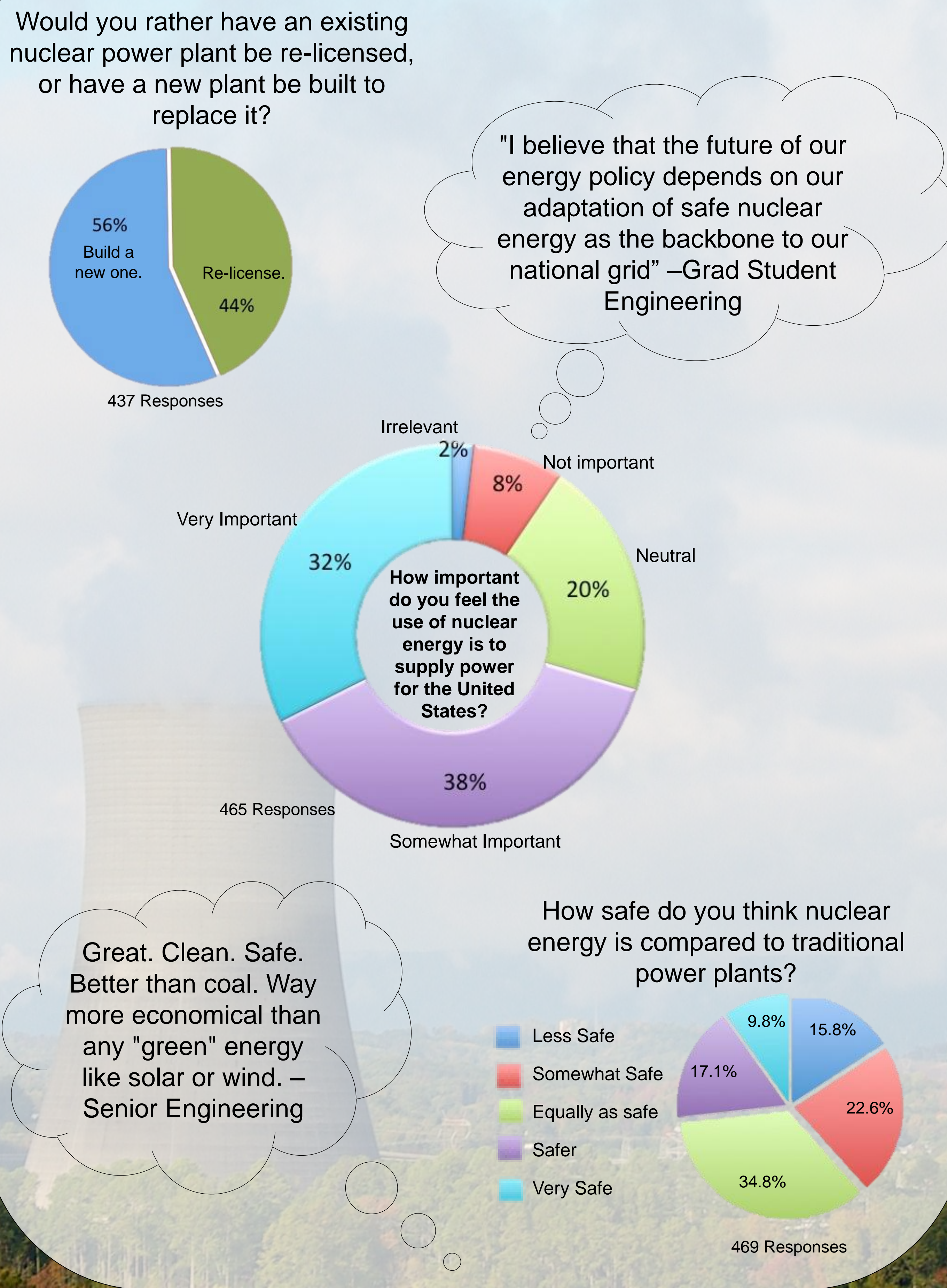
Abstract

With our ever-increasing energy demands, the United States is in dire need of an expansion of greener technologies to provide power with a more environmentally friendly means of production. To solve this issue, we evaluated the current status of nuclear power generation and analyzed the possibility of a more dominant role within our society. This broad subject includes aspects of governmental policy, economics, public sentiment, and comparisons to other nations. Through research and surveys, we have determined that nuclear power has a significant role to play in the future of our nation.

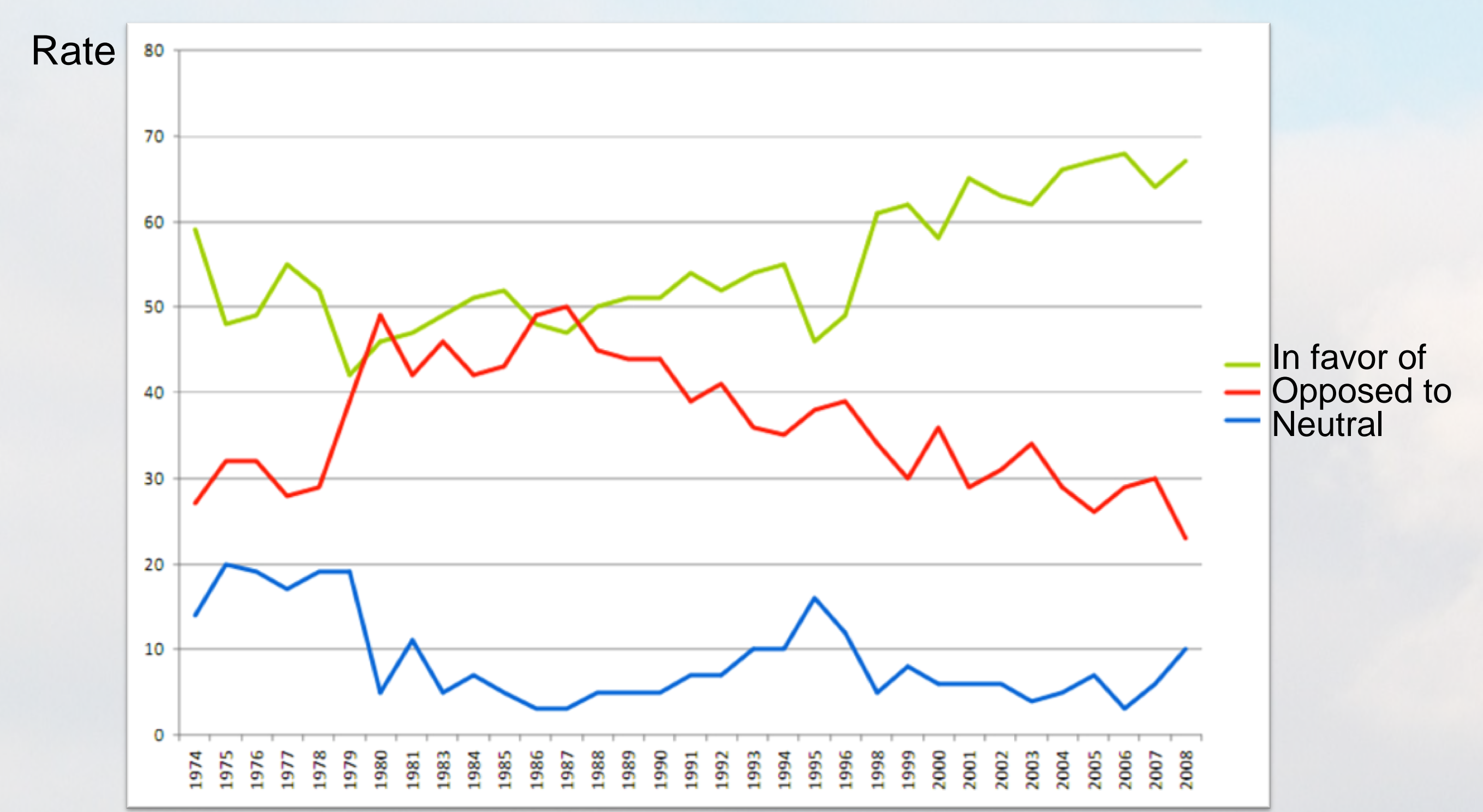
Background

- Construction cost for a coal fired plant is approximately \$3 – 3.5 million per megawatt versus a nuclear plant that costs approximately \$5.5 – 8.2 million per megawatt
- To power a light bulb for a year, it only takes .035 pounds of uranium as opposed to 714 pounds of coal
- Currently there are 104 commercial reactors at 64 plants
- No new plants have commenced construction since 1974
- There are 26 pending applications for the construction of new nuclear power plants
- New construction has stalled over the past four decades because the cost was becoming unreasonable, obtaining a permit was burdensome, and accidents caused the public to turn against nuclear power

Survey Results/Outcomes



Public Perception on Nuclear Power: USA

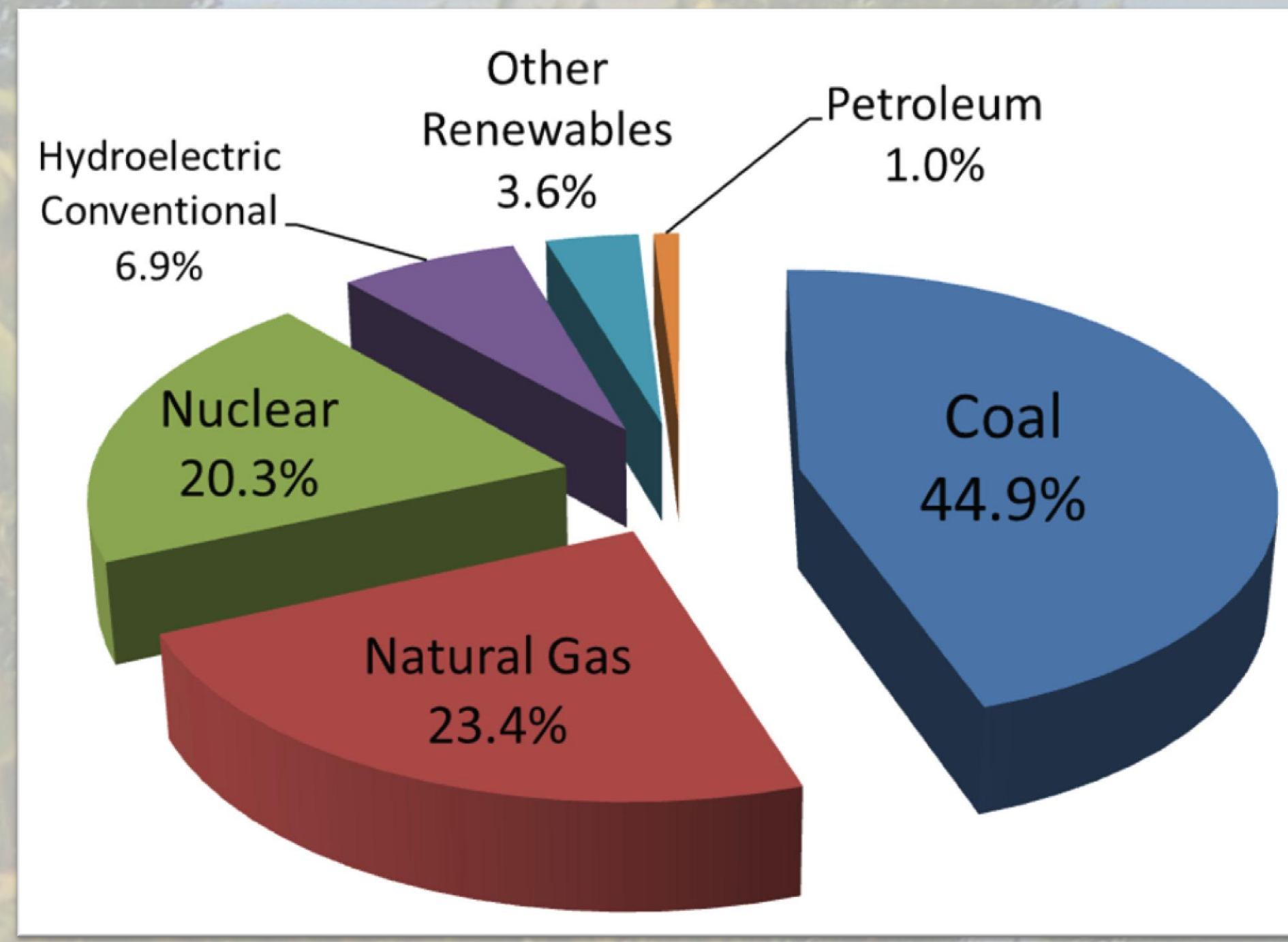


The change in public view on nuclear energy within the United States over the past four decades.³

Conclusions/Recommendations

- The United States government advocates for the expansion of nuclear power through incentives such as tax breaks and loan guarantees
- The majority of the general public approves of nuclear energy generation and supports the development of this green technology
- Other European nations have greatly benefitted from an expanded nuclear energy program, which the United States could and should follow
- Based upon current conditions, along with small changes, nuclear power has the potential to take a more dominant role within the United States

2009 U.S. Electricity Generation by Source



- Nuclear power currently produces 20% of all electricity needs
- Largest green energy output
- Produces 800 TW annually

European Comparison

"France's nuclear power industry has been called 'a success story' that has put the nation 'ahead of the world' in terms of providing cheap, CO₂-free energy"¹

"In a year, in Germany we save 170 million tons of CO₂ by using nuclear power plants. If we shut down the nuclear power plants, the only alternative is coal."²

Methods/Process

- Researched articles and journals regarding policy and nuclear energy background
- Conducted a survey to ascertain a sample of students and their views on nuclear power generation

Acknowledgments

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References

³http://www.iea.org/work/2008/bangkok/toth_acceptance.pdf
⁴http://en.wikipedia.org/wiki/File:2008_US_electricity_generation_by_source_v2.png
<http://www.synapse-energy.com/Downloads/SynapsePaper.2008-07.0.Nuclear-Plant-Construction-Costs.A0022.pdf>
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¹<http://www.theledger.com/article/20080814/COLUMNISTS/808140356>
²<http://news.bbc.co.uk/2/hi/europe/4295389.stm>