

It's not yours,  
Nor mine,  
It's ours.  
So, Protect your  
mother who,  
nourish you.

**ALTERNATIVE  
FUELS**



# UPEV (URINE POWERED ELECTRIC VEHICLE)



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# Introduction

- The increase in energy consumption has raised fears of exhausting vital natural resources.
- Rapid industrialization and massive growth in population has increased the dependence in natural fuels. Currently, 90% of our energy requirement are met by fossil fuels.
- Studies suggest that if exploited at the same rate, the coal reserves will be depleted in the next 200-300 years



# Need and Significance



1. To overcome the diminishing reserves of Conventional Fuels
2. To make low cost of fuel and eco-friendly product.
3. To reduce import cost and improve nations' economy.
4. Meeting the current global energy demand

# Statement Of The Problem



The main problem of the study is the ability of the human urine to produce energy.



# Objectives



- To generate electricity from urine
- To make the environment free from crude oil's fetter
- To run Electric Vehicles by the current produced from the urine.



# Hypothesis

There is no significant difference between the energy produced by the human urine and the energy produced by the main energy source in terms of energy generated.

# Review of Literature

Author/Date	Theoretical/ conceptual framework	Methodology	Analysis & Results	Conclusion
Jon Chouler, George Padgett, Petra Cameron (2016).	Conversion of organic matter into electricity with longer time period.	The use of biomass derived oxygen reduction reaction catalyst at the cathode increased the power density generation by the MFC	First set of analysis is MFC's could be used for remote sustainable region and results in energy generation from waste	It is an extremely attractive technology for the generation of clean electricity from a range of waste stream.
Mohammed M.EL-Kassaby, Yehia A.Eldrainy, Mohammed E.Khidr (2016)	Injection of HHO gas to engine of generator by blocking the fuel inlet and lets fresh air mixed with gas as fuel.	By using principle of Wankine cycle for the four stroke operation consideration based on the fuel inlet as air mixture with hydrogen gas.	First analysis of inlet fuel to the engine head as input and results with stroke operation by exhaust of smoke.	This ensures that a engine can run by use of gas as fuel to it by neglecting gasolines such as petrol, diesel, and kerosene.



# Methodology



Electrolysis of urine.



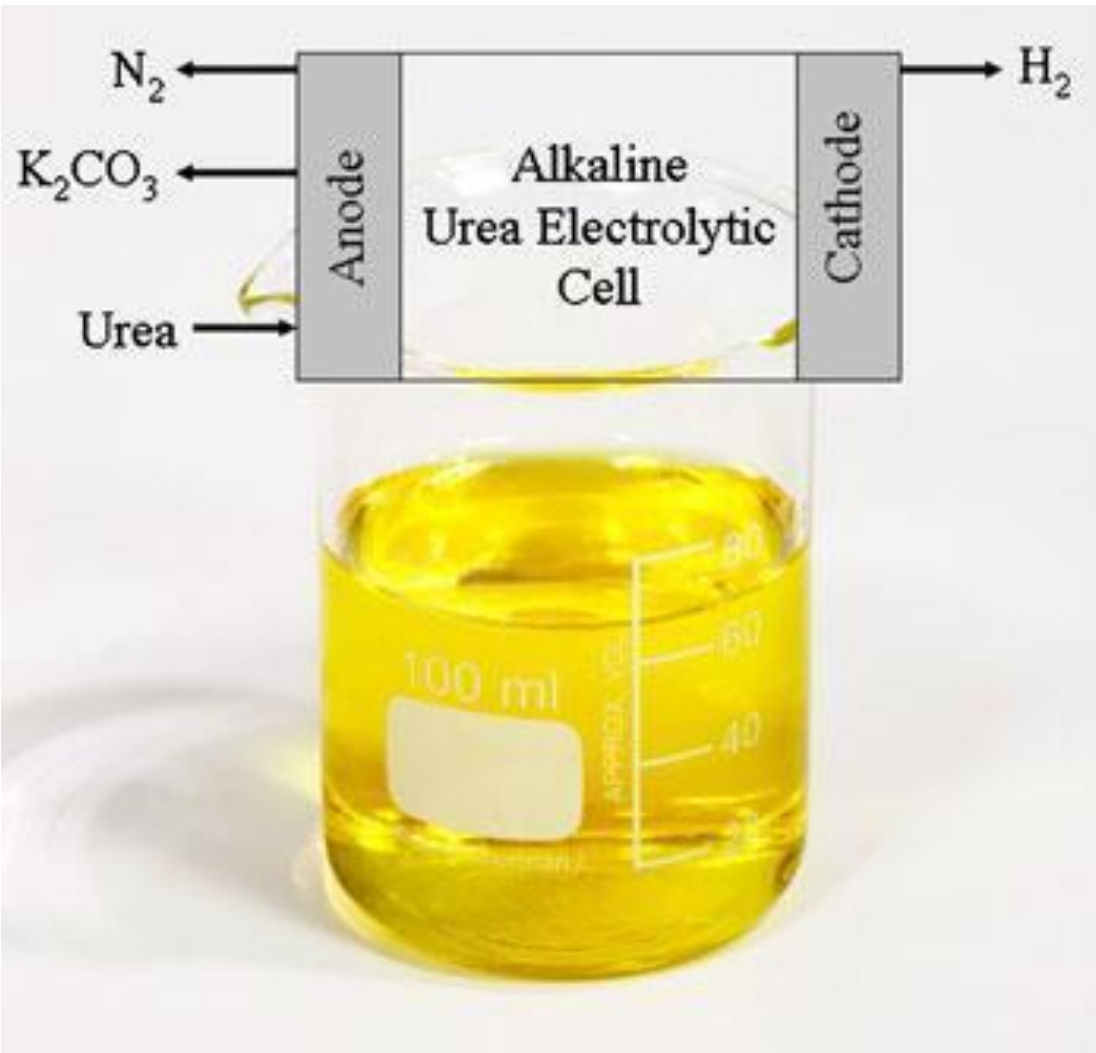
Generating power by the electrolysis of urine



Passing the power to the fuel cell of EVs



Checking the efficiency of power in fuel cell



# Analysis and Interpretation

- To run a vehicle it requires 13.7V to 14.7V.
- 50 ml of urine produces 0.7V of energy
- 1 litre of urine can produce approx. 14V of energy
- So, the energy produced from urine is efficient to run up vehicle.

# Conclusion

- Comparing with other fossil fuels the energy produced urine emits less carbon dioxide
- It is cost efficient because the maintenance of Fuel cell is quite lesser
- This technology can be implemented in residential areas, farms, and industries
- It can also be used in other fields where there is a need for fuels like gasoline and diesel

*“The future of our planet is in OUR hands  
That’s why energy matters”*

*Be the Change you wish  
to see in the world*

*miles to go before I sleep*

*Thank You...*

