

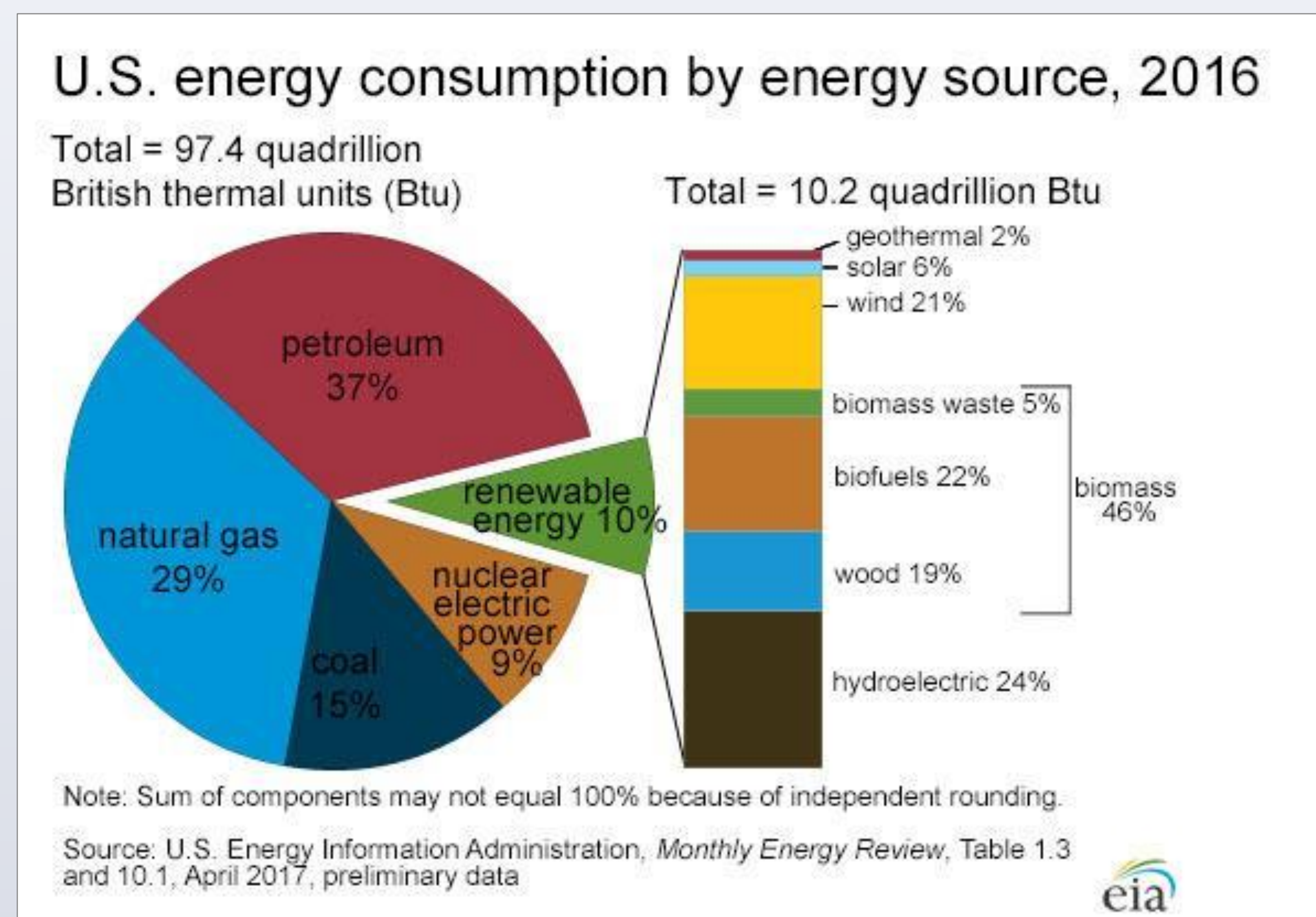
Using Bacteria To Create Electricity

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Energy Crisis and Water Treatment

The economic growth of a country significantly depends on the extensive availability of energy sources. In the US, most sources of energy are non-renewable, with renewable sources on the rise.



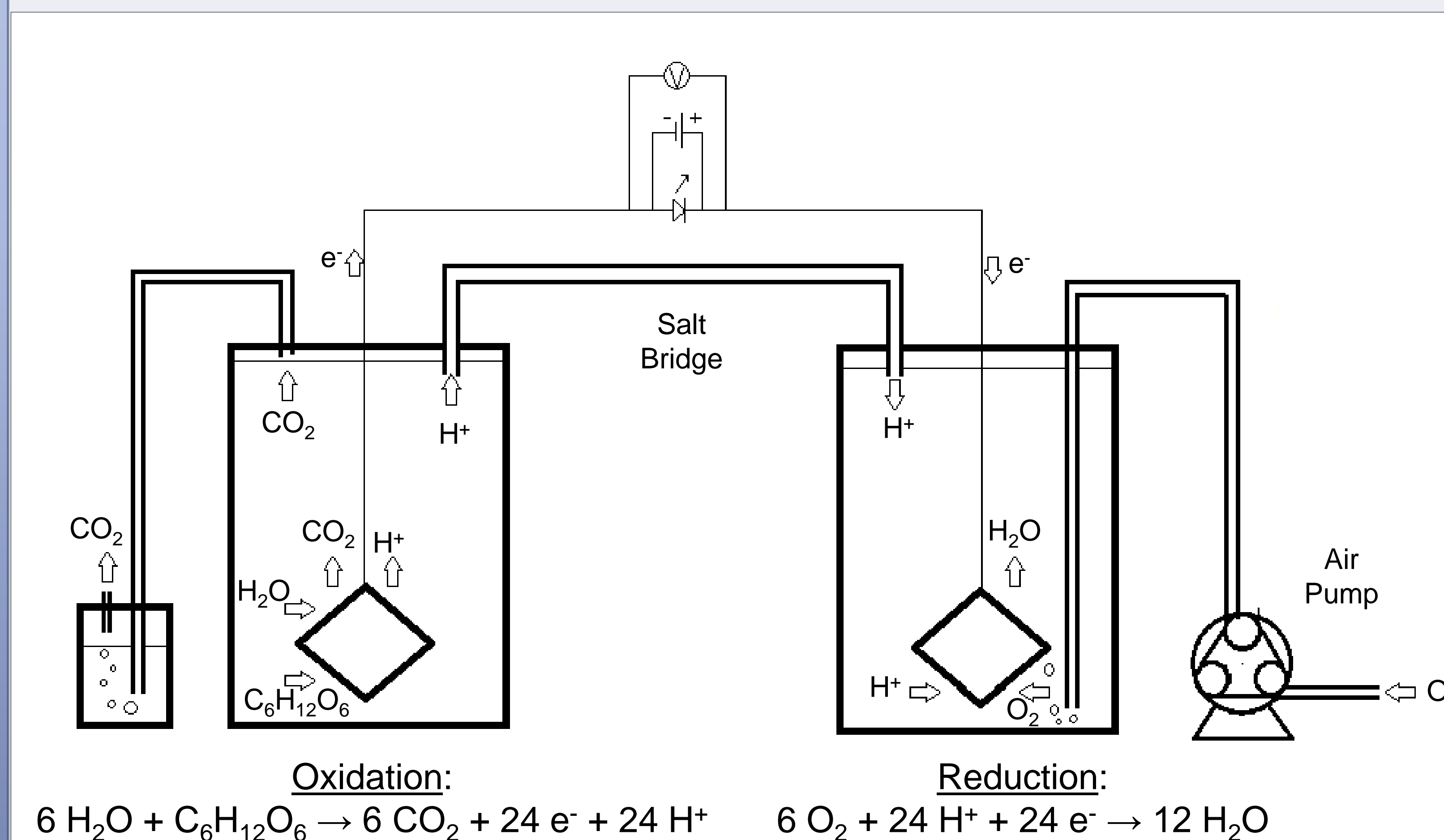
Currently, wastewater treatment is a costly procedure, while wastewater contains untapped resources.



Source: <http://www.biologicalwasteexpert.com/blog/category/microbiology, pH and Wastewater Microbes, June 2014>

Concept

- Perform two half equations of carbon source oxidation on different electrodes of a closed circuit.
- Transfer protons and electrons between electrodes.



Design of a two chamber Microbial Fuel Cell

The Solution

Microbial fuel cells (MFCs) are a new and innovative way to generate energy and clean wastewater.

What are MFCs

In Microbial Fuel Cells, bacteria produce electricity by extracting electrons from organic matter during cellular respiration.

Wastewater contains a lot of easily degradable organic matter for bacteria to produce electricity.

Microbial Fuel Cells lower exploitation of natural resources, clean wastewater and produce electricity.



Source: <https://atomiczar.wordpress.com/category/quimica/>, Pila Microbiana, September 2014

More Information

