Text alternative for infographic:

# Title: Geothermal & the Renewable Energy Landscape

[Icons representing wind, geothermal, hdyro, and solar power are shown together on an illustrated landscape.]

173,000 terawatts of solar energy reach the Earth’s surface at any given moment. Refer to footnote 1 for source.

Wind is a low-cost, low-impact technology.

Hydropower is a long-standing, reliable resource.

Poised for growth, geothermal is an abundant resource with low environmental impacts.

## Subsection: Geothermal Energy Impacts

[Icon for air emissions shown with zero percent inside.] Binary plants are closed-loop systems, which means they release almost zero emissions into the atmosphere.Refer to footnote 2 for source.

[Icon for earthquake shown.] Harnessing geothermal energy, especially enhanced geothermal systems (EGS), can cause microearthquakes known as induced seismicity. Generally, these earthquakes are low-magnitude and can be managed. Refer to footnote 3 for source.

[Icon for water drop shown.] Depending on the type of geothermal system, as little as 0.01 gallons of water per kilowatt hour (gal/kWh) are used.Refer to footnote 4 for source.

## Subsection: Renewable Energy Impacts Comparison

This section contains a bar chart that is based on the highest possible values from life-cycle operations.

The bar chart shows values for geothermal, wind, solar, and hydro displayed according to two axes. The first axis is for air pollution, which is measured in lb of CO2 equivalent/kWh and ranges from 0.1 to 0.6. The second axis is for water usage, which is measured in gal/kWh and ranges from 1 to 5. For air pollution, the highest bar is for hydro, the second highest tied between geothermal and solar, and the lowest for wind. For water usage, the highest bar is for hydro, the second highest for geothermal, the third for solar, and the lowest for wind. Air pollution is cited from source 5, and water usage from source 4 (refer to footnotes). Actual values can be found in the following table.

|  |  |  |
| --- | --- | --- |
| **Energy Type** | **Air Pollution (lb of CO2 equivalent/kWh)** | **Water Usage (gal/kWh)** |
| Geothermal | 0.2 | 0.73 |
| Wind | 0.04 | 0.01 |
| Solar | 0.2 | 0.19 |
| Hydro | 0.5 | 4.5 |

## Subsection: A Closer Look

Overall, all renewable energies have low environmental impacts. But their reliability and potential for development (limited or unlimited) varies.

This section contains a four-section quadrant chart divided by one vertical and one horizontal line. The scale for the vertical line moves from limited to unlimited as it goes down. The scale for the horizontal line moves from unreliable to reliable baseload power (not dependent on weather) as the scale moves right. The top-left quadrant is empty of icons. In the bottom-left quadrant are icons for wind power and solar, indicating they are unlimited and unreliable. In the top-right quadrant is the icon for hydro, indicating it is limited and reliable. In the bottom-right quadrant is the icon for geothermal, indicating it is unlimited and reliable. Geothermal is ideal due to its reliable baseload, unlimited resource, and low environmental impacts.

## Subsection: Sources

1 <http://energy.gov/articles/quiz-test-your-solar-iq>

2 <http://energy.gov/eere/geothermal/geothermal-faqs>

3 <http://energy.gov/sites/prod/files/2014/02/f7/egs_factsheet.pdf>

4 [http://geo-energy.org/geo\_basics\_environment.aspx#enviroimpacts](http://geo-energy.org/geo_basics_environment.aspx%23enviroimpacts)

5 <http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/public-benefits-of-renewable.html>