

Comparison of Choices in Energy Resources

Energy Source	Installed Capacity	Capacity over 15 years	GHG Emissions per yr	Percentage of City Resource Mix
Battery Storage				
Coal				
Geothermal				
Hydrogen-Clean				
Hydropower				
Natural Gas				
Oil				
Solar with Battery Storage				
Wind with Battery Storage				
Solar without Battery Storage				
Wind without Battery Storage				

Assessing what mix of energy resources we decide to invest in each year locks us into a direction for many years to come. Therefore, this assessment, that involves vast complexities, requires vision, expertise and the ability to be open to new technology. Looking at today's prices does not tell the complete story. In simple terms, some energy sources, like renewables, might cost more in the installation, but end up paying for themselves through a free supply of wind and solar for years. Using fossil fuel resources carries with it long-term high expenses that pile up in the ongoing purchase and transport of that fuel and its waste, in addition, not to mention the expense to bury toxic waste and the maintenance of waste areas. Price volatility is also a huge, unpredictable issue with fossil fuels, especially gas.

Compare the 1.6 billion construction cost of Lincolnland Energy's 1.3 GW gas plant in Pawnee, plus the necessary ongoing prices of water and gas to run it as opposed to a 200 MW solar plant with battery storage that gives at least 20 years of free energy backed up by Dallman 4 kept only as a peaker plant.

You will note in these charts we have a column that breaks down the percentage distribution amount for each energy source used. For example, what percentage of our local energy comes from renewables in comparison to coal? Many utilities report how their fossil fuel use stacks up against percentages of clean energy use. This is a critical tool that needs to be highlighted.