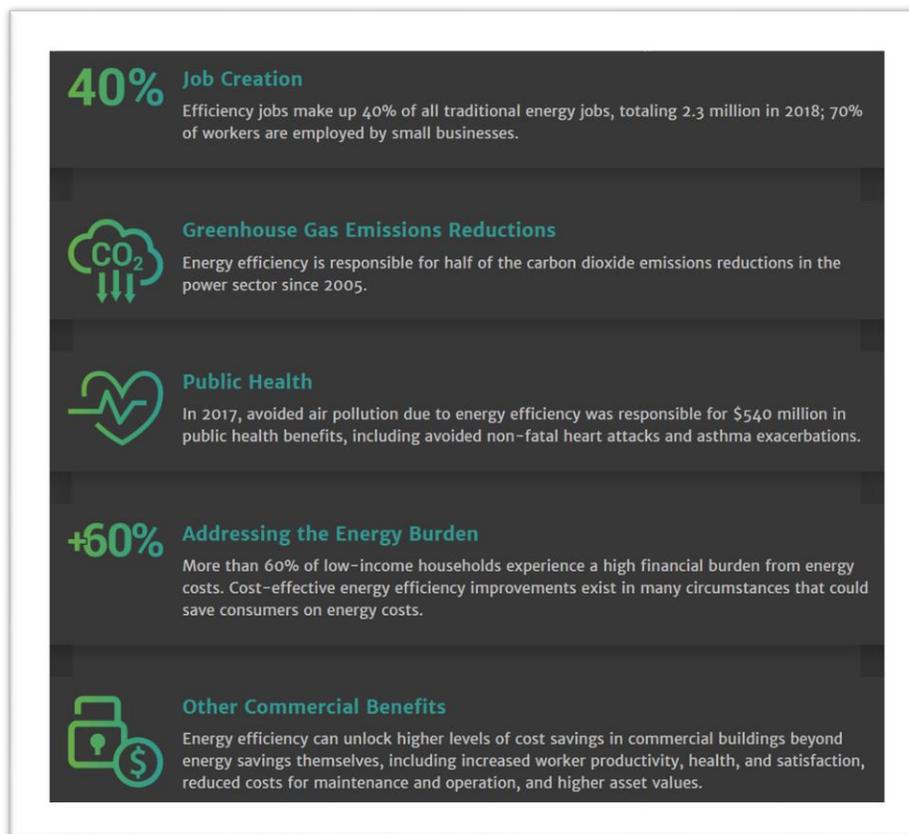


## Smart Rebuilding: Energy Efficiency Paves the Road to Recovery

If you are asking yourself why energy efficiency is important, the better question should be why is it NOT important. The clean energy segment was hit extremely hard by the coronavirus. The workforce in this industry accounted for more than one out of every 50 American workers at the beginning of the year. According to the [Clean Jobs America](#) report, clean energy jobs had been growing 70% faster than the overall economy from 2015-2019.

As we rebuild we need to build back stronger and more resilient, in ways that protect human health, grow the economy, and curb climate change. Clean energy and energy efficiency can help disadvantaged Americans reduce their energy bills and save money by using less energy. In addition, energy efficiency can reduce indoor and outdoor air pollution by lowering emissions, increase public health, and create jobs, especially in the buildings and construction industry where roughly [1.3 million](#) Americans work on energy efficiency upgrades. Following the 2008 financial crisis the Recovery Act supported roughly [900,000 U.S. clean energy jobs](#) from 2009 to 2015, the largest single investment in clean energy, helping to jump-start the American wind and solar industries. Investing in a clean energy economy will support jobs, drive innovation, improve energy efficiency and add to a more resilient electric grid just as it has done in the past.



\*Source: [Energy Efficiency Impact Report](#)

Why energy efficiency can lead the clean energy industry.

### ► Energy Efficiency Leads Job Creation

The energy efficiency field accounts for more jobs than any other sector in the clean energy industry. Prior to the pandemic, approximately 2.4 million Americans worked in energy efficiency and it was the fastest growing sector for jobs in the clean energy industry. In 2018, employment in the energy efficiency sector grew by 3.4%, accounting for half of the entire energy sector’s job growth. **Texas held the #2 spot by employing 162,816 energy efficiency jobs last year** and the promise of growth is only increasing. The clean energy industry is proven to provide a great return on stimulus investments and according to the latest report by E4TheFuture and E2<sup>1</sup>, the state that would reap the most growth in average jobs per year over five years is Texas. Energy efficiency would create 60,547 jobs in Texas annually for five years with a federal stimulus investment, and energy efficiency, renewable energy, and grid modernization combined would create 72,455 jobs each year.



Rank	STATE	TOTAL*	Renewables	Grid & Storage	Energy Efficiency	Clean Fuels	Clean Vehicles
1	California	536,919	142,957	24,021	323,529	5,785	40,627
2	Texas	241,289	39,303	13,204	169,398	2,073	17,309
3	Florida	166,032	24,987	5,499	123,560	2,897	9,090
4	New York	159,337	18,049	4,290	126,739	1,680	8,579
5	Michigan	125,365	11,447	3,896	85,323	625	24,073
6	Illinois	125,364	17,707	5,077	91,024	1,468	10,088
7	Massachusetts	122,477	21,963	7,050	88,231	569	4,664
8	Ohio	114,388	10,607	3,135	83,165	1,353	16,129
9	North Carolina	112,720	12,349	3,727	88,001	1,538	7,105
10	Virginia	97,305	9,047	2,520	80,181	312	5,245

\* Statewide clean energy employment Q4 2019. 42 states and the District of Columbia employed more clean energy than fossil fuel workers in 2019. (Source: [Clean Jobs America 2020 report](#))

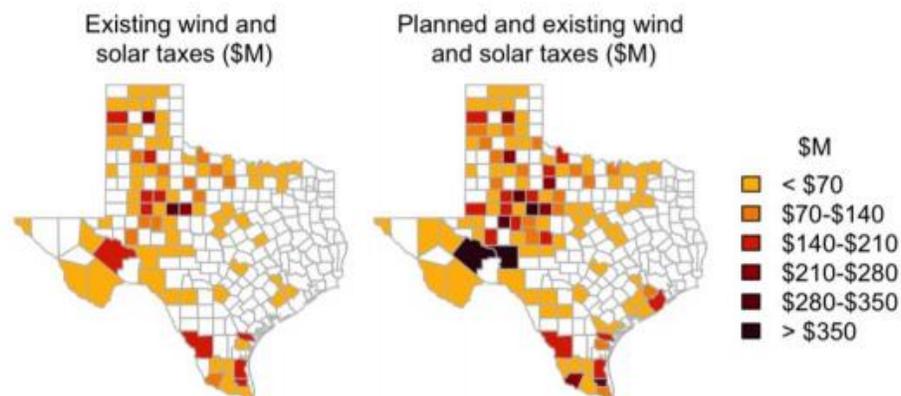
<sup>1</sup> [Build Back Better, Faster: How a federal stimulus focusing on clean energy can create millions of jobs and restart America’s economy](#)

## ► Building Codes Prevent Financial Disasters & Increase Resilience

The power of the 24-hour news cycle coupled with an increase in both severity and frequency of weather-related disasters has captured the public's attention – Mother Nature's power in full effect leaves viewers feeling nothing short of shock and awe. However, the emphasis of the financial wreckage pales in comparison to the non-stop display of the property damage inducing incident itself. Notably, in the past 30 years, there have been **118 Severe Storms affecting the U.S. - each storm individually producing damage in excess of \$1 billion dollars or more.**<sup>2</sup> There is a consensus among experts that one of the ways to reduce the financial devastation of such storms is simple: stricter and better building codes. By updating building codes, each city can preemptively guard its buildings and infrastructure to sustain intense storms, and in turn, reduce rebuilding and insurance costs often passed on to the public. The Insurance Institute for Business & Home Safety (IBHS) states that minimum improvements over the base building code can help homeowners lower the overall cost of their community's recovery after a disaster. The National Institute of Building Sciences found that [every \\$1 spent on disaster mitigation saves \\$4 in community disaster recovery expenses.](#)

## ► Generate Tax Revenue

A recent report titled [The Economic Impact of Renewable Energy in Rural Texas](#)<sup>3</sup>, assessed the financial impact brought by utility-scale, renewable energy projects across rural Texas. Specifically, the report focused on the amount of local taxes to be generated by the renewable utility projects, and the direct payments the hosting landowners would receive from these projects. It proposed that a given county in Texas could expect between \$9.4M and \$13.1M in lifetime taxes for each 100 MW solar project located within its boundaries. As for the landowners where the renewable utility projects are located? It concluded that in Texas, the existing solar and wind projects **will pay Texas landowners between \$4.8 billion and \$7.3 billion over the lifetime of the projects.** A win for landowners and tax districts.



*\*Estimates of the amount of taxes paid to each county for existing wind and solar farms (left) if all projects with interconnection agreements are built (right).*

<sup>2</sup> According to the Nation Oceanic and Atmospheric Administration (NOAA) 118 Severe Storms were comprised of 17 Wildfires, 39 Tropical Cyclones, 29 Floods, 22 Droughts, 14 Winter Storms, and 5 Freezes

<sup>3</sup> Joshua Rhodes, PhD

## ► Consumers See Savings

The average US household saves almost \$500 annually thanks to efficiency standards that apply to new appliances such as dishwashers, refrigerators and water heaters. Simple efficiency efforts such as cleaning or replacing a clogged air filter can save 5-15% on your air conditioning costs, while switching to LED bulbs, which use up to 90% less energy and last 10-25x longer than incandescent ones, will save you money on your energy bill. Furthermore, water heating is often the second largest energy cost for most households, averaging at \$250 a year. It is not necessary to overheat your water, considering it is often mixed with cold water. Adjusting to 120°F can save energy and reduce money spent on utility and water bills.

## ► Increase Public Health

With the COVID-19 pandemic came stay at home orders issued across the nation and world. Air quality in a home or office can have a large impact on one's health, largely because of the long hours spent inside, which is much more prevalent now as many of us work and attend school from home. The quality of indoor air ranges anywhere from two to five times worse than the air outside. Allergens, molds, insects and vermin all contribute to poor air quality inside our buildings, and all prove to be formidable opponents. However, given the right tools and education, building operators can ensure better indoor air quality with a few simple and cost-efficient additions. Small changes to improve air quality include controlling a building's humidity, using a quality air filtration system, and regularly (and properly) maintaining a building. In addition, weatherizing a home is a great step to improving air quality at home, which consists of sealing cracks and gaps that appear around doors and windows, as well as addressing proper ventilation to unconditioned spaces. This will help protect a building from condensation, pesky critters, and foster an environment less likely to produce mold.

## ► Sustainable

The 2019 [Energy Efficiency Impact Report](#)<sup>4</sup> quantifies the scale of national efficiency investments made over decades and their many impacts. Our country has avoided a 60% increase in energy consumption since 1980 due to energy efficiency investments, while improving our lives and the environment. Just as energy efficiency and its policies have been important in the past, they are even more important now for rebuilding our economy in a post COVID pandemic world. Energy efficiency is the cleanest, fastest and most cost-effective choice to meet America's energy needs and cut air pollution. It saves consumers and businesses money, creates jobs, and benefits the economy.

## ► Closing Thoughts

Through energy efficiency and clean energy we can reduce air pollution and greenhouse gas (GHG) emissions associated with fossil fuel power plants by generating our energy from renewable sources such as wind and solar, leading to positive impacts on public health. There is nearly [90 Million MWh of untapped economic electricity efficiency](#) in Texas (the highest potential in the country). Investing in energy efficiency programs continues to be cheaper than conventional electricity or gas for utilities to meet customer needs. We can create a cleaner future for generations to come and ensure that we are taking care of our environment. As laid out above everyone benefits from energy efficiency and the advantages generated by the clean energy industry seem endless. Let's rebuild better.

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<sup>4</sup> Citation from the Alliance to Save Energy, the American Council for an Energy-Efficient Economy (ACEEE) and the Business Council for Sustainable Energy