



ENERGY

Made *Easy*



Introduction and Objective

This document provides the basis for evidence-based information and messaging related to industrial processes and new or emerging clean energy technologies. This messaging can be deployed across all relevant audiences to ensure consistency and accuracy. This document also provides a readily accessible resource for community leaders and industry team members to reference during conversations with external partners and members of the media.

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Talking Points

Energy Transition — What is it?

OVERVIEW

- ➔ The “energy transition” refers to the integration of new technologies and lower-carbon energy sources within industrial and commercial processes using low-carbon energy sources like solar, wind, and nuclear power.
- ➔ The integration of more renewable energy sources is not something that can happen overnight – it will require decades of infrastructure development and technological innovation to effectively utilize, store, and distribute energy from wind, and solar sources. In the interim, energy transition projects and practices, such as carbon capture, offer a pathway to continue leveraging conventional energy while reducing carbon emissions.
- ➔ Companies worldwide are adapting to consumer needs and the global shift toward more sustainable manufacturing practices. Part of that shift has led to the implementation of technologies like carbon capture and storage, which allow us to produce more energy, support energy independence, and reduce carbon dioxide emissions, all at the same time.
- ➔ With the world’s largest hydrogen pipeline network, an integrated multi-modal system, geologic storage capabilities and a strong presence of refineries – Louisiana is positioned to be a global leader in the energy transition. By leveraging these advantages and investing in clean energy solutions, Louisiana can create clean energy jobs, reduce its carbon footprint, and contribute to a more sustainable future.

Fast Facts:

Since the passage of the Bipartisan Infrastructure Law (BIL) and the Inflation Reduction Act (IRA), Louisiana has received **more than \$1.4 billion** in federal investments in clean energy and the power grid, direct air capture, electric vehicles and charging infrastructure, plugging of orphaned wells, and more.

TALKING POINTS

- The world has gone through periods of transitions for centuries, which has led to the modern-day advancements we all enjoy today.
- We are in another period of transition as we develop and implement new and innovative technologies that will improve environmental outcomes for years to come.
- Louisiana is positioned to be a global leader in cleaner industrial practices which will, in turn, lead to billions in economic investments into our state.
- Louisiana has been an energy leader for decades, both domestically and internationally, and we have the assets needed to chart the path forward towards clean energy production.

Louisiana is Leading the Way

OVERVIEW

- ➔ On almost every national list, Louisiana is consistently among the lowest ranked states for things like infrastructure, education, economy, and crime, however, with billions of dollars invested into cleaner production and operations, and as the third largest energy producer in the U.S., Louisiana can be first not only in the nation, but first in the world for industrial growth and distribution.
- ➔ Louisiana’s economic and geologic landscape provides us with the opportunity to chart the path forward to not only meet sustainability goals, but also to implement new and emerging technologies that will change the way the world operates.
- ➔ By embracing advancements in manufacturing technologies, educating the public on science-based facts and impacts, and supporting new projects, we can position Louisiana as a global leader in energy and create a brighter, cleaner, and safer future for all.
- ➔ There is a growing demand for products and investments that will work in tandem with existing industry to help lower carbon emissions. Our state is primed to use research to inform and provide guidance on how to approach the energy transition in a way that ensures economic prosperity for the state and a cleaner environment for future generations.
- ➔ For specific workforce, economic, and tax impacts in your specific parish, please see Parish Profiles in [Appendix B](#).

Fast Facts:

Economists project **\$33.8 billion** in industrial projects under construction and **\$120.6 billion** in projects that have been announced statewide.

(Source: LA Economic Forecast, Loren Scott)

TALKING POINTS

- Usually, we find Louisiana ranked last on many national lists. But with our state’s position to lead industrial growth, and environmental change, Louisiana can be a global leader in carbon reduction efforts.
- Cleaner air is important to all of us. By embracing new technologies and alternatives for capturing and storing carbon, we can lead the way to a cleaner future with more opportunities for our children and generations to come.
- Louisiana has a unique opportunity to lead the world in developing and implementing new technologies that will reduce the global carbon footprint and make a significant contribution to achieving carbon neutral goals while boosting our state and local economies.
- As innovative and safer energy processes are developed, it is critical for Louisiana – a global industrial leader – to adapt and transform to not only meet consumer and market needs, but to be major player in contributing to carbon reduction goals worldwide.

OVERVIEW

- ➔ Over the past decade (2011-2021), the Gulf Coast has supported more than \$180 billion in energy manufacturing investment; as much as \$5.5 billion on an average annualized basis. *(Source: [LSU Center for Energy Studies](#))*
- ➔ With each new investment, we are encouraging our graduates and skilled workers to stay close to home by providing them with ample opportunities to be part of the growing workforce that is aiming to create a cleaner, more profitable future for generations to come.
- ➔ Industry provides high paying and reliable jobs for both college graduates and the skilled trade workforce, allowing for the median income in industrial areas of Louisiana to be among the highest compensated in the state.
- ➔ Louisiana's higher education institutions and technical training programs continue to support the state's world-class talent pipeline.
- ➔ Louisiana has the opportunity to become a leader in supporting these safe and clean large-scale investments in our environment and economy.

Fast Facts:

According to Louisiana Economic Development (LED), Louisiana experienced a surge of economic activity in 2023 with **over \$14.3 billion in capital investment**, resulting in **11,517 anticipated new jobs** from emission reduction investments, positioning the state to lead the way for a more sustainable future.

(Source: LED)

Additionally, over the last 6 years, the private sector has announced over **\$55 billion in capital expenditures** in low carbon or carbon free projects in Louisiana which are projected to **create an estimated 25,000 jobs**.

(Source: LA Climate Action Plan)

TALKING POINTS

- In 2023 companies invested over \$14.3 billion in projects to reduce emissions representing 11,000 new jobs strengthening the state's economy.
- We want our kids, graduates, and local workforce to have job opportunities that keep them close to home.
- Industry provides reliable and high-paying jobs many of which don't require a college degree.
- Jobs in industry support wages that are spent locally on homes, in local restaurants and retail stores, and at small businesses.
- Industry provides for both permanent and temporary construction jobs and offers ample opportunities for local industrial support companies to grow and expand.

Economic & Tax Base Impacts

OVERVIEW

- ➔ By supporting ongoing oil and gas interests while exploring hydrogen, solar, wind, alternative fuels, electric vehicle battery and CO₂ reduction opportunities, Louisiana is seeing a major economic boost that is employing thousands and attracting billions of dollars in private investment. *(Source: LED)*
- ➔ The industrial tax base plays a critical role in Louisiana's economy, especially for the local economy in parishes within an industrial corridor whose tax revenues largely fund government services, law enforcement, parks, and public schools.
- ➔ In communities where industry is the main source of tax revenue, the jobs that industry creates and the vendors who provide subsidiary services would likely decline without the industrial support base. This would ultimately result in population decline as residents move to other areas with more opportunity and access.

Fast Facts:

In 2023, Louisiana's petrochemical, oil and gas, paper and industrial manufacturing industries paid **67% of the total property taxes** collected in the state.

(Source: Louisiana Department of Revenue and the Louisiana Tax Commission)

In 2023, the manufacturing sector employed **138,000 Louisiana residents** with an average annual income of **\$97k**.

(Source: LED)

TALKING POINTS

- Without the taxes provided by local industry, our community would likely look very different.
- Revenues generated by industry provide funding for our government services, law enforcement, public schools and more. The community services you are accustomed to would change overnight if we didn't have revenue from industrial taxes.
- Not only does industry play a huge role in our local economy but because of industry, small businesses are able to grow and thrive by providing support services to the workforce and industrial sector.
- Support for new technologies and projects will help to keep Louisiana's highly skilled workforce and billion-dollar project opportunities and the associated investments, economic stimulus that come with them within the state.
- We must ensure that these projects happen in Louisiana so they will not go to neighboring states and take with them high-paying jobs for both skilled laborers and college graduates, along with critical tax dollars that fund our school systems, local government services, and more.

OVERVIEW

- ➔ The energy transition aims to reduce industrial greenhouse gas emissions through various forms of decarbonization.
- ➔ Decarbonization refers to the process of reducing the amount of carbon dioxide emissions that are released from burning fossil fuels like coal, oil, and natural gas.
- ➔ Decarbonization has emerged as a crucial strategy to transform our global energy systems and achieve net-zero greenhouse gas emissions by 2050.
- ➔ As of 2019, Louisiana has the seventh highest CO₂ emissions in the nation with roughly 60 percent of emissions coming from the industrial sector and 14 percent from power generation. (Source: *Great Plains Institute*)
- ➔ Decarbonization efforts will create an opportunity for Louisiana in the development of the production capacity with lower or net zero greenhouse gas emissions for liquid fuels, chemicals, plastics, fertilizers, and other products that have historically been derived from fossil fuels.
- ➔ Decarbonization can be expensive. Companies are therefore trying to utilize the federal dollars through the IRA and Infrastructure Investment & Jobs Act (IIJA) to make upfront capital investments that can assist with reduced emissions in the future. (Source: [LSU Center for Energy Studies](#))

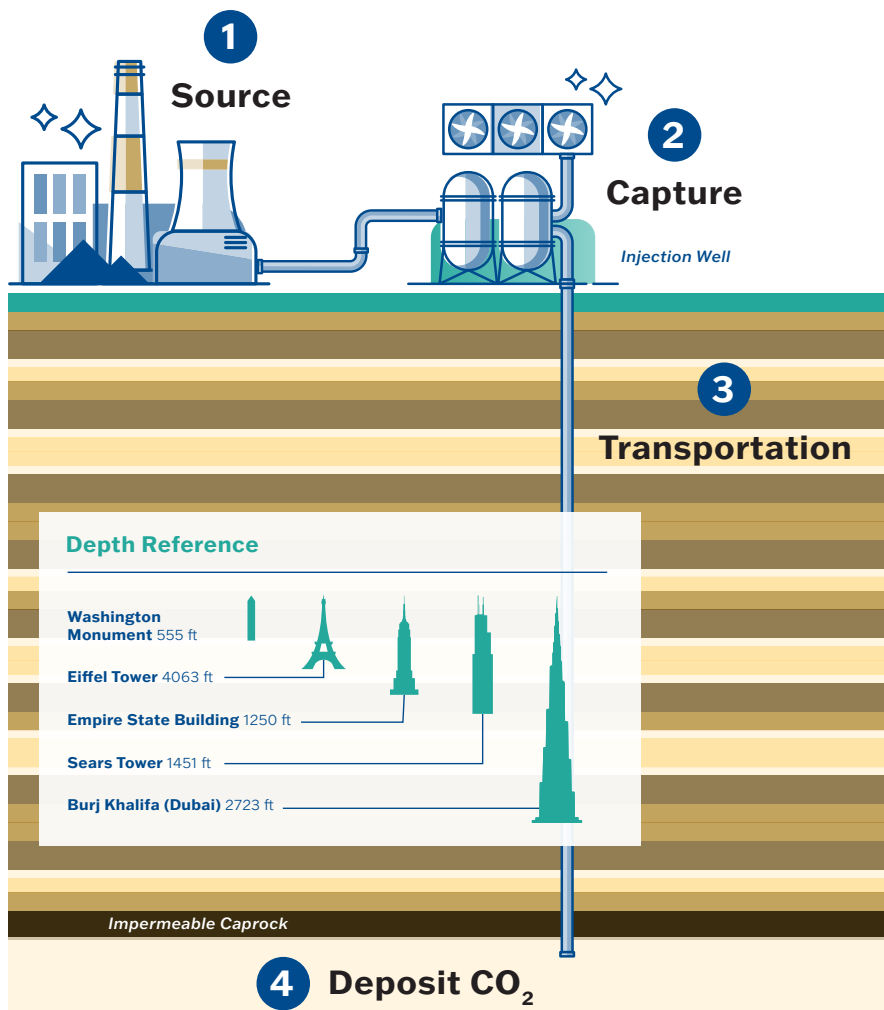
TALKING POINTS

- Decarbonization efforts can help our region maintain our energy independence and keep our industrial careers while also reducing the environmental impacts associated with energy and industrial production.
- Decarbonization efforts in our communities can include carbon capture and sequestration efforts, direct air capture hubs, and blue and green hydrogen investments.
- By leveraging our state's assets and resources and investing in clean energy solutions, Louisiana can create lower-carbon energy solutions jobs, reduce its carbon footprint, and contribute to a more sustainable future.
- There will be ongoing demand for oil and gas, but investing in decarbonization efforts can help the U.S. and our region in maintaining the capacity for production so those investments benefit our local and state economies.

Carbon Capture, Usage, and Storage

OVERVIEW

- ➔ Carbon capture technology combined with utilization (sometimes referenced as “use”) or sequestration (sometimes referenced as “storage”) is a way to reduce CO₂ from emissions sources (such as power plants or industrial facilities) using different technologies that separate CO₂ from the other gases coming out of a facility. The CO₂ is thus captured before entering the atmosphere and then either permanently stored underground or incorporated into certain types of products, such as concrete or chemicals. *(Source: World Resources Institute)*
- ➔ Many companies in Louisiana and across the U.S. have adopted carbon capture technology as a method for reducing carbon emissions in manufacturing practices.
- ➔ Worldwide, more than 400 million metric tons of carbon dioxide is already permanently stored in what are called pore spaces, or the empty spaces between porous rock layers deep underground under layers of impermeable caprock.
- ➔ Carbon capture plays a critical role in reaching emissions reduction goals worldwide by trapping 90% of excess carbon dioxide emitted through industrial processes. *(Source: LMOGA)*
- ➔ According to the Global CCS Institute’s 2022 report, there were 194 large-scale CCS facilities globally at the end of 2022, 94 of those in the Americas.



CCS (Carbon Capture Storage)

- ➔ Carbon capture storage is the process of trapping CO₂ and sequestering it underground.
- ➔ CO₂ captured during the carbon capture and sequestration process helps to ensure the environment remains free from an overabundance of CO₂ that can result in harmful greenhouse gases.

Talking Points

Carbon Capture, Usage, and Storage

- ➔ Louisiana’s natural geology is well suited for permanent CO₂ storage.
- ➔ Louisiana has \$117.7 billion in announced CCS projects pending Final Investment Decision. (Source: LA Economic Forecast, Loren Scott)
- ➔ Carbon Capture Sequestration has been in operation in the United States since 1972 when several natural gas facilities in Texas began storing more than 200 million tons of CO₂ underground.

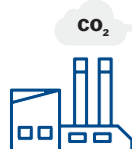
TALKING POINTS

- When Carbon emissions from industrial facilities are captured, they can be transferred to injection sites through pipelines. In Louisiana, we have been building large pipeline systems and drilling deep wells for over 100 years. Carbon Capture & Sequestration is a new way for Louisiana workers to use their expertise and position Louisiana as a leader in this field.
- Carbon Capture plays a critical role in reaching emissions reductions goals worldwide and is vitally important to the future of our economy, and our planet.
- Louisiana’s unique geology makes our state ideal in storing captured carbon dioxide safely and securely deep below the earth’s surface.
- Carbon Capture and Sequestration is a safe method to reduce greenhouse gas emissions and reach emissions goals.
- The technology utilized in CCS has been around for decades but is now being applied more broadly to better protect our environment.
- Now, with new investments, the state can do this on a larger scale to better meet sustainability goals, further making a positive impact on our environment and future.

Differentiating carbon capture and carbon removal

Carbon Capture, Utilization and Sequestration (CCUS)

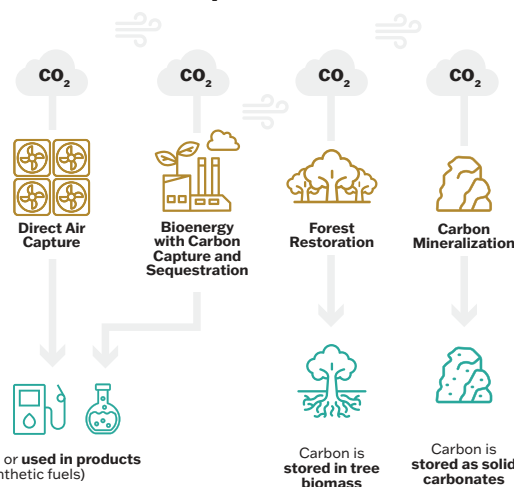
Capture of CO₂ at emissions source (e.g., industrial or power facilities) to prevent it from going into the air



Carbon is sequestered underground or used in products (e.g., concrete, chemicals, synthetic fuels)

Carbon Dioxide Removal (CDR)

Activities that remove CO₂ that’s already in the air, including the following:



NOTE: For CO₂ used in products, the lifetime of the product determines the duration of CO₂ storage; some utilization options only provide temporary storage.

SOURCE: World Resources Institute

Check out the Louisiana Mid-Century Oil and Gas Association’s video detailing how Carbon Capture and Sequestration work:



Louisiana's Unique Geography

OVERVIEW

- ➔ Louisiana's unique geological formations, particularly its deep saline formations and depleted oil and gas reservoirs, make it an attractive location for CCS investments.
- ➔ The southeastern region's oil and gas resources have been the source of jobs, income and prosperity for many. These resources have also provided the needed energy to power vehicles, generate electricity, and produce heat across the United States and other nations. *(Source: LSU Center for Energy Studies)*
- ➔ With the world's largest hydrogen pipeline network, an integrated multi-modal system, geologic storage capabilities and a strong presence of refineries – Louisiana is positioned to be a global leader in the energy transition.
- ➔ There are vast volumes of space in geological formations, such as sandstone, limestone, and shale that can hold gas – vast quantities of gas, which can also be used to sequester CO₂. *(Source: LSU Center for Energy Studies)*

TALKING POINTS

- Louisiana has been an energy leader for decades both domestically and internationally and we have the assets needed to chart the path forward towards lower-carbon energy production.
- By leveraging our unique geographic advantages and investing in clean energy solutions, Louisiana can create clean energy jobs, reduce our carbon footprint, and contribute to a more sustainable future.

OVERVIEW

- ➔ Sequestration wells are monitored throughout their lifecycle ensuring that groundwater and local ecosystems remain protected and free from impact.
- ➔ The storage sites are carefully chosen and have vast stores of porous rock deep underground which acts like a sponge to absorb the carbon into the gap areas.
- ➔ After CO₂ is injected underground, the sites are routinely monitored and assessed which is an important part of making storage of carbon dioxide (CO₂) safe, effective, and permanent. Also, sensors can make early detection of any potential issues.
- ➔ Monitoring technologies can be deployed for atmospheric, near-surface, and subsurface applications to ensure that injected CO₂ remains in the targeted storage formation, as well as to check for indicators of possible CO₂ migration out of a storage complex.

TALKING POINTS

- Carbon capture technologies have been in place for decades across the US and are among some of the most proven and safest technologies.
- Overall, carbon dioxide pipelines have an excellent safety record over the 50 years they have been in operation in the United States (US), with only one reported injury and no fatalities. (Source: *Great Plains Institute*).
- There is a lengthy process for determining a location for a sequestration site including the right geologic formations, community impact, and safety requirements.
- Sequestration sites are heavily monitored and assessed regularly to ensure safety throughout the lifetime of the well.

Primacy and the Regulatory Process

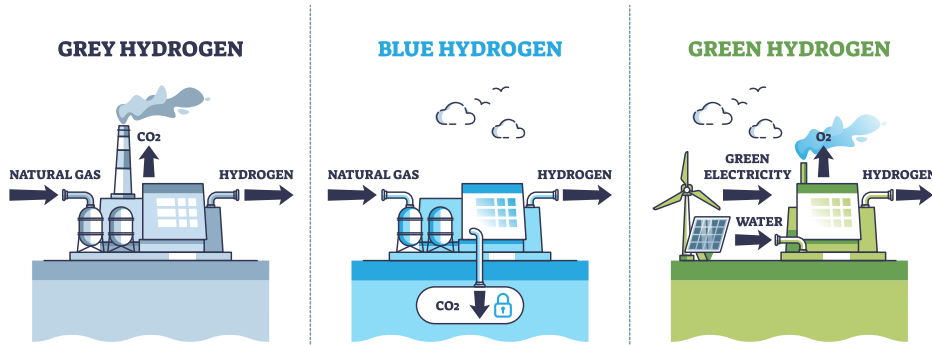
OVERVIEW

- ➔ In 2023, the Environmental Protection Agency granted Louisiana primacy for approving sequestration well permits for storing carbon dioxide.
- ➔ Louisiana is now one of only 3 states – and the only state in the Gulf South - to have been granted primacy for [Class VI wells](#), positioning the state to utilize our unique geologic structure to create significant investments into our environment and economy.
- ➔ Class VI wells are held to the standards and protections of the Safe Drinking Water Act (SDWA) which requires implementation of an inclusive participation process, incorporating environmental justice and civic rights considerations in the permit process. *(Source: National Energy Technology Laboratory)*
- ➔ Permit applicants for Class VI wells will be required to conduct an environmental justice review, assess alternative site locations, and propose mitigating measures to ensure potential adverse environmental effects are minimized. *(Source: National Energy Technology Laboratory)*
- ➔ Louisiana has also committed to examining the potential risks of each proposed well to minority and low-income populations and evaluate proposed sites using the EPA's Environmental Justice Screening Map. *(Source: National Energy Technology Laboratory)*
- ➔ For a list of potential projects and well applications see the Louisiana Department of Natural Resources list [here](#).

TALKING POINTS

- Primacy allows our state to continue to lead the nation in the clean energy transition and take ownership of ensuring community benefits are met with every new project or investment.
- The wells have sophisticated monitoring systems to keep track of stored CO₂.
- Class VI wells are held to extremely high standards, requiring community input, and environmental justice considerations. By having these standards in place, Louisiana can ensure a responsible path forward for growth.

Hydrogen Production



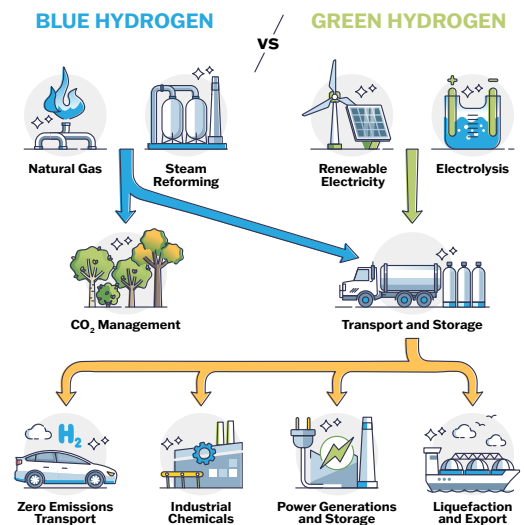
Grey Hydrogen is produced when natural gas is utilized for industrial processes, which emit CO₂ into the atmosphere and produce hydrogen without stopping the carbon from entering the atmosphere.

Blue Hydrogen is produced when natural gas is utilized for industrial processes, emits CO₂ – but it is captured and stored utilizing Carbon Capture & Storage before entering the atmosphere resulting in blue hydrogen as the end product.

Green Hydrogen is produced when processes like electrolysis or wind energy are utilized to produce zero-carbon electricity as the end product.

OVERVIEW

- ➔ Hydrogen is an energy carrier that can be used to store, move, and deliver energy produced from other sources. Hydrogen projects are meeting the market need and consumer demands for clean energy alternatives and help to reduce overall greenhouse gas emissions which makes our air cleaner and advance net zero goals.
- ➔ Depending on the process involved when creating energy from hydrogen, **blue hydrogen** or **green hydrogen** could be produced. (See chart below for an explanation on types of hydrogen)
- ➔ Several companies in south Louisiana are using a variety of methods to produce hydrogen, including steam methane reforming, gasification, and electrolysis.
- ➔ As Carbon Capture and Sequestration (CCS) technology continues to progress, companies in south Louisiana are well-positioned to produce blue hydrogen. In addition, south Louisiana has various pipelines and storage facilities for hydrogen transportation.



The chart above demonstrates how blue and green hydrogen are utilized to produce energy for transport, industrial chemicals that make up products we use every day, power generation and storage capabilities, and exports.

TALKING POINTS

- Hydrogen projects in our area will result in billions of dollars of economic impact while also further decarbonizing our own environment.
- Clean energy technologies that result in green or blue hydrogen are meeting the market demand to decarbonize, and they are directly reducing emissions and improving our environment.

Hydrogen as a Fuel Source

OVERVIEW

- ➔ Many industrial regions in Louisiana have abundant and diverse energy and resources that can be utilized as feedstocks for hydrogen production.
- ➔ Hydrogen, when used as an alternative fuel, produces zero tailpipe emissions and can reduce greenhouse gas emissions in heat-intensive industries like steel or chemical manufacturing.
- ➔ By using hydrogen as an alternative fuel, energy is produced with minimal or no harmful emissions, making it an alternative, clean energy source.
- ➔ South Louisiana is home to large-scale ammonia production facilities. Ammonia can be broken down into its component gases, hydrogen, and nitrogen. The resulting hydrogen can then be used as a fuel or as a feedstock for various industrial processes.

TALKING POINTS

- Utilizing hydrogen as a fuel source can further help in reducing greenhouse gas emissions and reach emissions goals since it is produced with minimal or no harmful emissions.
- Hydrogen can be used as a fuel to power vehicles, generate electricity, and heat buildings. When hydrogen is burned as fuel, it releases energy and produces only water vapor as a byproduct, making it environmentally friendly and compatible with much of our existing infrastructure.



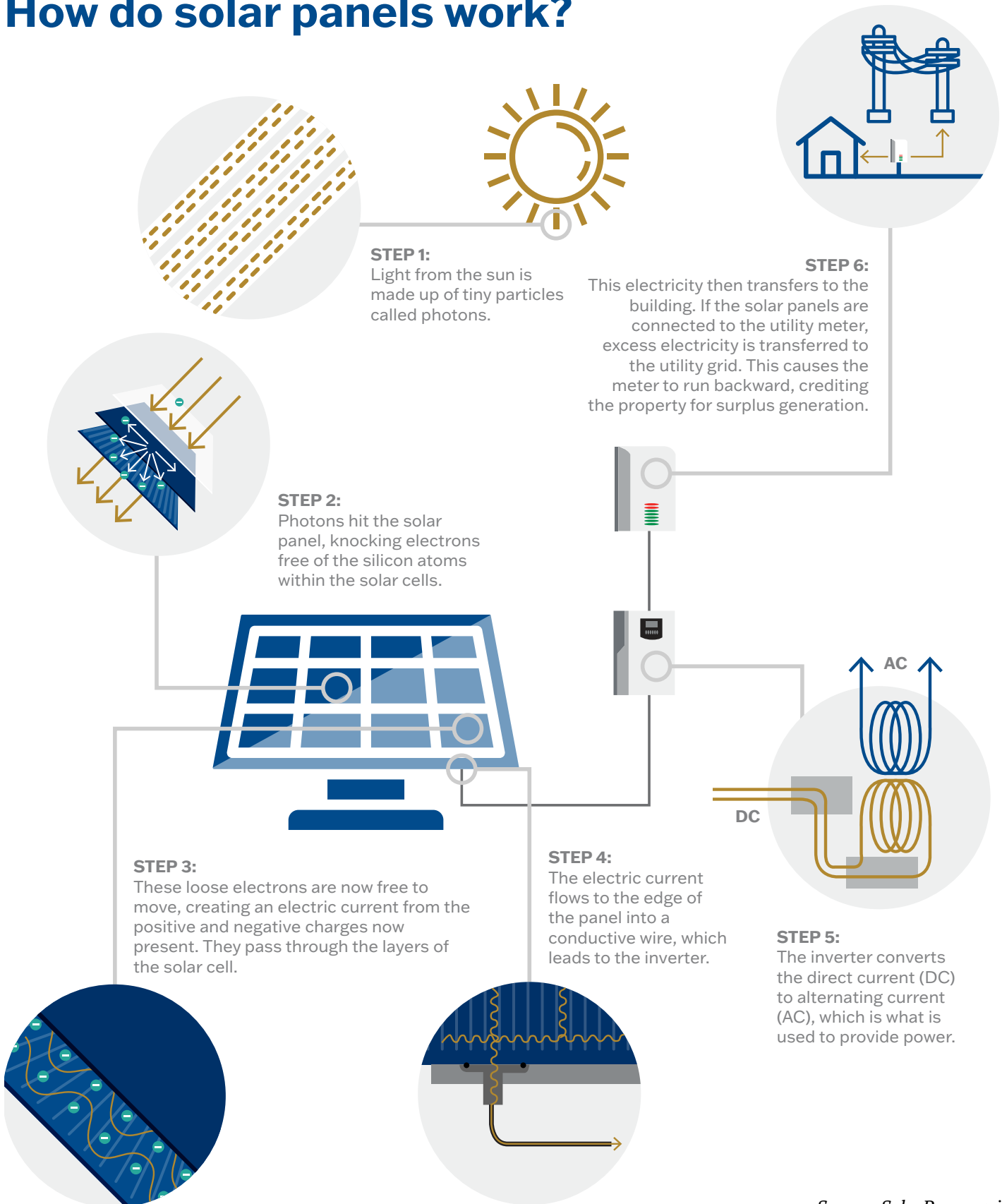
OVERVIEW

- ➔ The sun emits an enormous amount of energy in the form of radiation. Solar energy systems absorb this energy and convert it into useable forms, including electricity through photovoltaic cells and panels.
- ➔ In Louisiana, there is the potential to generate up to 13,000 megawatts of solar power, equivalent to the state's total electricity demand. Our state's climate and landscape make for an ideal location to generate solar power. *(Source: Louisiana Economic Development)*
- ➔ There are currently **60+** solar companies operating in Louisiana which employ over **3,000** Louisiana residents and have the potential to provide over **7,000** new jobs. *(Source: Louisiana Economic Development)*

TALKING POINTS

- Louisiana's unique landscape and location make our state a prime location to generate solar power which can generate the equivalency to our state's energy demand.
- Solar companies currently operating in Louisiana employ thousands of Louisiana residents with the potential to grow that number in the coming years.

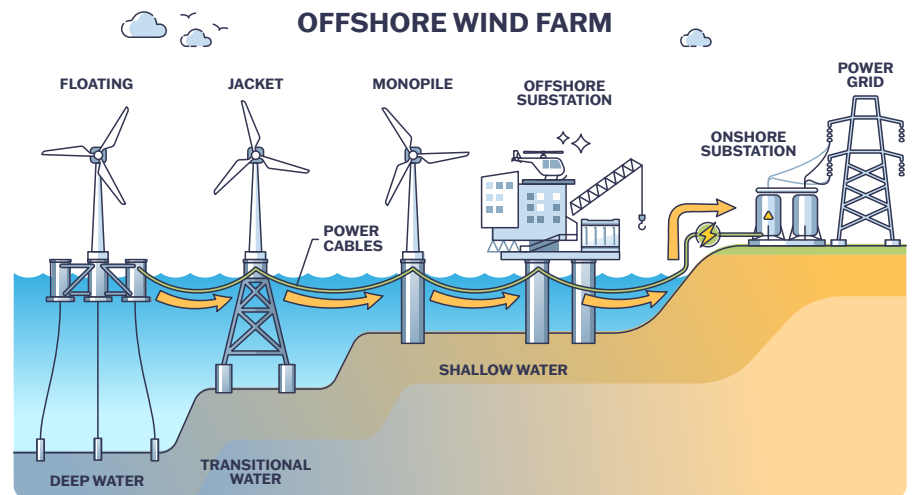
How do solar panels work?



Source: SolarPower.guide

OVERVIEW

➔ Wind energy systems harness the kinetic energy of the wind for conversion into a usable form of energy. Converting wind energy into electricity has been in place for more than 200 years. Today, wind can be used to provide power to the electrical grid and in remote locations where grid interconnections do not exist. (Source: U.S. Dept. of Natural Resources)



- ➔ Louisiana's location on the Gulf of Mexico positions the state as a great fit for offshore wind power generation. In 2022, the federal government selected two areas for offshore wind development south of Lake Charles. (Source: Louisiana Economic Development)
- ➔ Offshore wind in the Gulf of Mexico could potentially generate 10% of all U.S. Wind Energy. (Source: Louisiana Economic Development)
- ➔ According to the National Renewable Energy Laboratory, Louisiana ranks as the fourth highest state in the nation for offshore wind technical potential, with potential for a single offshore wind project to create 4,470 construction jobs and 150 full-time operations jobs.
- ➔ Louisiana's existing manufacturing sector could benefit from offshore wind, as the components for offshore wind turbines, such as blades and towers, can be manufactured locally. This would not only create jobs in the manufacturing sector but also reduce transportation costs for wind operators.

TALKING POINTS

- Wind energy systems have been in place for centuries, and today can allow us to further obtain energy independence.
- Our state's location on the Gulf of Mexico makes us a great fit for implementing offshore wind projects and positions us to make a national impact in the generation of wind energy.
- Louisiana workers and businesses are world leaders in offshore oil and gas production. Much of the technology and equipment used in offshore wind has been used in offshore oil and gas for decades, which gives Louisiana a big advantage in the implementation of offshore wind.

OVERVIEW

- ➔ Environmental Justice involves: 1) ensuring environmental externalities and disasters do not place an undue burden on disadvantaged communities (fair treatment), and 2) ensuring that those communities have access to the decision-making process (meaningful involvement). (Source: *LSU Center for Energy Studies*)
- ➔ Projects funded by the Department of Energy are obligated to provide benefits to communities – in particular, to the disadvantaged communities - in which they locate as a stipulation of being able to progress with development - essentially showing that companies are held accountable as well for ensuring energy-related projects are beneficial to the areas they're in. (Source: [U.S. Department of Energy](#))
- ➔ This includes developing fair hiring practices, vocational schools, and workforce investments to hire locally, becoming a committed partner in the community by providing resources to schools and local governments or funding projects in the area.

TALKING POINTS

- Many companies have been actively engaged with the community and are working to ensure investments into the local workforce, community spaces, and safety.
- In fact, federal law requires companies and states to make environmental justice assessments related to potential project sites.
- The benefits of improved public health and air quality by reducing emissions can be beneficial to all communities in the industrial corridor.

The Truth about Cancer Alley

OVERVIEW

- ➔ The term “Cancer Alley” is often referred to as the geographical region between Baton Rouge and New Orleans that maintains a heavy industrial presence. This term, however, has no basis in fact. There are no credible scientific studies of health that support the allegation that cancer rates in the industrial corridor are higher than the rest of the state.
- ➔ According to the Louisiana Tumor Registry (LTR), the Industrial Corridor between Baton Rouge and New Orleans has one of the highest cancer survival rates and lower overall rates of lung cancer.
- ➔ The only sound body of evidence on cancer rates in Louisiana – the Louisiana Tumor Registry - has shown for decades that while the rates of cancer in the state are higher than much of the country, they are not uniformly higher in the industrial corridor and in many cases are lower than the rest of the state. (*Source: LA Tumor Registry Volume 37*)

TALKING POINTS

- Overall, our cancer rates in Louisiana are about the same as across the country, however we have lower survivor rates mostly because fewer people see their doctor for regular exams and screenings.
- Lifestyle factors can increase the likelihood of getting cancer and our state’s obesity, smoking, and STD rates are all significantly higher than the national average.
- In fact, your chances of getting lung cancer are lower in Southwest Louisiana than in other parts of the state.

Community Benefits

The information in this section is intended to guide community leaders in parishes where new or expanded projects are proposed. The information can be used to discuss local needs with company representatives.

Many of the companies that are making plans to expand or build new facilities in Louisiana with projects related to decarbonization or renewable energy will be submitting applications to the U.S. Department of Energy (DOE) to obtain funding or tax credits that were appropriated by the Infrastructure Investment and Jobs Act, also more commonly known as the Bipartisan Infrastructure Law (BIL). During this process, companies are required to detail their plans for investing in disadvantaged communities who must receive 40% of the overall proposed project's benefits.

The local community can facilitate and establish agreements that detail the types of investments the company agrees to provide to benefit the members of the community, especially those who are most directly impacted by the project. Companies should do extensive research and outreach to ensure local community members are involved in shaping their investment plans, which in turn can help ensure a higher level of certainty that the investment will result in tangible economic and social benefits to affected disadvantaged communities.

Examples of company investments in local needs include, but are not limited to:

- Workforce education and training programs including job placement, workforce development, internships, and scholarships
- Local infrastructure needs (e.g. streets, sidewalks, parks, trails, bike paths, parks, tree plantings, water systems, etc.)
- Financial literacy programs
- Community programs such as sports, arts, cultural & music or community events
- Veterans' services and job access programs
- Handicapped accessibility improvements
- Environmental projects such as brownfield remediation or other cleanup efforts
- Economic development projects or programs such as downtown revitalization, small business assistance, entrepreneurship training, etc.
- Transportation projects such as bus routes, shuttle services, bike share, bike racks at community locations
- Public health initiatives such as health screenings or public health supplies

For more information, see the Department of Energy's **Community Benefits Agreements Toolkit** at www.energy.gov/justice/community-benefit-agreement-cba-toolkit.

Considerations:

- ➡ Has this company done business or made investments in your parish previously?
- ➡ What areas of your community need the most improvement? Roads, drainage, recreation, etc.
- ➡ Have you or the company held public meetings to get feedback from community members?

FAQs

The Frequently Asked Questions below are representative of topics and questions derived from various sources including social media platforms and other sources.

Can a CO₂ pipeline rupture?

- Pipelines are the safest means of transport for liquified CO₂.
- There are nearly 6,000 miles of CO₂ pipelines in the United States with around 90% used for enhanced oil recovery with a good safety record. (Source: Dr. Mark Zappi, University of Louisiana at Lafayette)
- The likelihood of a pipeline rupture and likelihood of a slow escape of injected CO₂ is low. (Source: Dr. Mark Zappi, University of Louisiana at Lafayette)

What happens if CO₂ is released from a pipeline?

- Oil, natural gas, and naturally occurring carbon dioxide (CO₂) gas deposits have been naturally trapped and stored within subsurface geologic formations for millions of years, providing evidence that it is possible to store CO₂ in similar geologic formations for very long periods of time.
- However, despite existing and enforced safety regulations, incidents do happen and it's important to know and understand what happens if CO₂ is released from a pipeline. If CO₂ is released from a pipeline, it will rapidly drop in pressure, going from a supercritical or dense phase to a gas. As this occurs, solid CO₂ may form around the pipeline in the form of dry ice. It also dissipates into the surrounding air. Operators have pressure monitors on their pipelines to know when a leak or rupture occurs and can initiate shut-off valves to mitigate the release of CO₂ from the pipeline.
- In small quantities, the CO₂ will dissipate around the pipeline and not create a hazardous situation. Since CO₂ is denser than the air we breathe, larger releases of CO₂ will create a vapor cloud around the release or rupture site. In rare cases, this vapor cloud could have negative health effects in high concentrations, including dizziness and asphyxiation. There have been no fatalities attributed to CO₂ pipelines in the US to date. (Source: Great Plains Institute)

Can injection wells pump toxic chemicals into the ground?

- CO₂ captured through the CCS process for sequestration is pure CO₂ in a condensed state and is non-toxic.

Is carbon dioxide dangerous?

- Carbon dioxide (CO₂) is nontoxic and non-flammable and takes on many forms. In gas form it is used to make sodas, in aerosols and as respiratory stimulant. In solid form, it is used as dry ice. In supercritical form, it is used in dry-cleaning, removing oils and fats from foods and for de-caffeinating coffee. (Source: Dr. Zappi)

Can captured carbon being stored underground impact local water sources or contaminate drinking water supply?

- CO₂ captured through the CCS process is stored roughly a mile underground below impermeable rock, meaning no liquids or gases can pass through this type of rock formation, making it the safest location to store excess Carbon Dioxide where it will not impact drinking water sources.

Carbon capture projects typically don't create significant workforce impacts? Why should we still support them?

- The CCS projects throughout the state have a direct ripple effect throughout the economy because having the ability to capture carbon for utilization or storage allows existing companies to implement larger-scale projects which would create hundreds and in some cases thousands of permanent jobs, like advanced recycling facilities, that rely on low-carbon hydrogen for production.

Are there other unsafe chemicals being captured with the CO₂?

- During the capture process, carbon dioxide is cleaned and scrubbed of any residual chemicals, ensuring the CO₂ entering pipelines and eventually stored underground is clean.
- Is carbon dioxide hazardous in high concentrations?
- Carbon Dioxide is a colorless, non-flammable, and non-toxic gas which displaces air and oxygen. This means carbon dioxide can cause asphyxiation in large quantities where there is low airflow or filtration.

Is carbon capture safe?

- Carbon capture processes have been proven safe and effective and have been in use for decades.
- Oil, natural gas, and naturally occurring carbon dioxide (CO₂) gas deposits have been naturally trapped and stored within subsurface geologic formations for millions of years, providing evidence that it is possible to store CO₂ in similar geologic formations for very long periods of time.
- The United States has been safely injecting natural gas into underground formations that are able to store gas until it is needed. This geological and engineering experience is being applied to storage of CO₂, a safer, non-combustible gas.
- Additional evidence that CO₂ can be safely stored underground comes from a more than 40-year-old process called enhanced oil recovery (EOR) where CO₂ has been injected underground to increase oil production. *(Source: National Energy Technology Laboratory)*

What regulations are in place to protect the public and environment related to CCS projects?

- The U.S. Environmental Protection Agency (EPA) is tasked with the overall responsibility of establishing and enforcing any regulations associated with injecting and storing carbon dioxide (CO₂) in the subsurface.
- The Federal requirements under the Safe Drinking Water Act (SDWA) for underground CO₂ injection for the purpose of geologic storage applies to owners or operators of wells that will be used to inject CO₂ into the subsurface for the purpose of long-term storage.
- This established a new class of well, [Class VI](#), as part of the Underground Injection Control (UIC) Program. *(Source: National Energy Technology Laboratory)*
- EPA's final rule also requires an inclusive public participation process, incorporating EJ and civil rights considerations in permit review processes, enforcing Class VI regulatory protections, and incorporating mitigation measures.
- Permit applicants will be required to conduct an environmental justice review process, assess alternative site locations, and propose mitigating measures to ensure any potential adverse environmental effects are minimized.
- Louisiana also has committed to examine the potential risks of each proposed Class VI well to minority and low-income populations, evaluate proposed sites using EPA's Environmental Justice Screening and Mapping Tool (EJ Screen) and hold an enhanced public comment period if increased risk factors are identified. *(Source:*

If CO₂ is bad for the environment, why would you store it under a lake that is used for recreation? What happens if it leaks?

- The geologic pore space located a mile under Lake Maurepas is the ideal kind of rock to safely store CO₂. Testing is underway right now to confirm these characteristics before any CO₂ can be stored in the pore space.

Does carbon capture incentivize the ongoing use of fossil fuels?

- There will be ongoing global demand for energy that will still be heavily reliant on fossil fuels. However, reducing CO₂ emissions with CCS and other new technologies will help achieve carbon reduction goals.

Are there higher rates of cancer where industry is prevalent (i.e. Cancer Alley)?

- The term “Cancer Alley” has no basis in fact. There are no credible scientific studies of health that support the allegation that cancer rates in the Industrial Corridor are higher than the rest of the state. The only sound body of evidence on cancer rates in Louisiana – the Louisiana Tumor Registry - has shown for decades that while the rates of cancer in the state are higher than much of the country, they are not uniformly higher in the industrial corridor and in many cases are lower than the rest of the state.
- Louisiana’s tobacco, obesity and HPV-related cancers are all significantly higher than the national average, not surprising when you consider the state’s obesity, smoking and STD rates are all significantly higher than the national average. Each of these is a known risk factor for at least 25 different types of cancer and are concrete reasons for high cancer rates in the state. (*Source: LCA*)

Why are facilities being built in areas already overburdened by industrial plants?

- The industrial corridor was largely located geographically due to the abundance of access to resources like river transportation (which is the safest), available land, and access to major hubs like New Orleans.
- When companies conduct studies of where to locate, they assess a number of details, many of which are logistics for locating near existing feedstocks, and near easy transport.

APPENDIX A:
Glossary of Terms

Blue hydrogen is produced mainly from natural gas using a process called steam reforming which brings together natural gas and heated water in the form of steam. The output is hydrogen, but carbon dioxide is also produced as a by-product. The production of blue hydrogen typically also includes the use of carbon capture and storage to trap and store the carbon produced.

Carbon is the fourth most abundant element in the universe. With its ability to form complex molecules such as DNA and proteins, carbon makes life on Earth possible. (Source – U.S. Dept. of Energy)

Carbon capture and storage (CCS) is a method of reducing carbon dioxide emissions, involving a three-step process: capturing the CO₂ produced by power generation or industrial activity, such as hydrogen production, steel or cement making or from the burning of fossil fuels in power generation; transporting it; and then permanently storing it deep underground. This CO₂ is then transported from where it was produced, via ship or in a pipeline, and stored deep underground in geological formations.

Carbon capture, usage, and subsurface sequestration (CCUS) involves capturing carbon dioxide (CO₂) emissions before they are released into the atmosphere. Once the CO₂ is captured, it can either be stored or used, including to make essential carbon-based products.

Carbon Capture, Utilization and Storage: Carbon Capture refers to the process of capturing carbon and transporting it via ship or pipeline to be re-used in industrial processes by converting it into other materials, for example, plastics, concrete or biofuel.

Decarbonization is the reduction or [elimination](#) of carbon [dioxide](#) emissions from a process such as manufacturing or the production of energy.

Direct air capture is a method of removing carbon dioxide from the air that can then be transported for use or permanently stored deep underground, or it can be converted into products.

Electrolysis involves using electricity to split water (H₂O) into hydrogen (H₂) and oxygen (O₂). This method is powered by renewable energy sources such as solar or wind and yields green hydrogen with minimal environmental impacts.

Emissions refers to gases being released into the air from power plants and factories, like greenhouse gases.

Energy diversification refers to increasing the range of energy sources to lessen the dependence on a single energy source. Diversification is essential to energy security and the most common energy sources, such as oil, coal and natural gas are subject to market forces which can result in interruptions to supply or high fluctuations in price.

Energy transition refers to a major structural change in energy supply and consumption within an energy system. Currently, a transition is underway to sustainable energy to reduce global greenhouse gas emissions.

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. (Source: EPA)

Fossil Fuels including [oil](#), [coal](#) and [natural gas](#), are non-renewable resources that formed when prehistoric plants and animals died and were gradually buried by layers of rock. Over millions of years, different types of fossil fuels formed -- depending on what combination of organic matter was present, how long it was buried and what temperature and pressure conditions existed as time passed. Today, fossil fuel industries drill or mine for these energy sources, burn them to produce electricity, or refine them for use as fuel for [heating](#) or transportation. (Source: US Dept. of Energy)

Grey hydrogen is created from natural gas, or methane, using steam methane reformation but without capturing the **greenhouse gases** made in the process. Grey hydrogen is essentially the same as blue hydrogen, but without the use of carbon capture and storage. Currently, this is the most common form of hydrogen production.

Green hydrogen is produced using renewable energy sources, typically through electrolysis. Green hydrogen is considered the cleanest hydrogen energy source, as it produces no direct carbon emissions. Green hydrogen is made by using clean electricity from surplus renewable energy sources, such as solar or wind power, **through a chemical process known as electrolysis**. This method uses an electrical current to separate the hydrogen from the oxygen in water. If this electricity is obtained from renewable sources, it produces energy without emitting carbon dioxide into the atmosphere.

Hydrogen is a clean fuel that, when consumed in a fuel cell, produces only water. Hydrogen can be produced from a variety of domestic resources, such as natural gas, nuclear power, biomass, and renewable power like solar and wind. These qualities make it an attractive fuel option for transportation and electricity generation applications. It can be used in cars, in houses, for portable power, and in many more applications. Hydrogen is an energy carrier that can be used to store, move, and deliver energy produced from other sources. (Source U.S. Dept. of Energy)

Hydrogen as an alternative fuel is the concept of utilizing hydrogen gas as a clean and sustainable energy source for

various applications where natural gas is used, such as in semitrucks or aircraft. By using hydrogen as an alternative fuel, energy is produced with minimal or no harmful emissions, making it an alternative, clean energy source.

Industrial: Refers to companies whose main business is manufacturing, processing, or other mechanical production.

Industrial corridor is an area with a cluster of manufacturing or other industries, and is usually near ports, highways, or rail transport.

Net Zero Emissions refers to obtaining a balance between greenhouse gas emissions produced and greenhouse gas emissions taken out of the atmosphere. This means, for any greenhouse gas emitted, we must remove the same amount annually. (Source: Climatecouncil.org)

Renewable energy is that comes from naturally replenished resources, such as the sun, wind, movement of water and geothermal heat. Renewable energy can be used for electricity generation, space and water heating and cooling, and transportation. Non-renewable energy, in contrast, comes from finite sources, such as coal, natural gas, and oil.

Renewables, including solar, wind, hydropower, biofuels, and others, are at the center of the transition to less carbon-intensive and more sustainable energy systems. (Source: International Energy Agency)

Sequestration refers to the storage of carbon dioxide (CO₂) after it is captured from industrial facilities and power plants or removed directly from the atmosphere

Steam methane reforming, typically considered an easier and least expensive method of converting hydrogen to fuel, is the process of combining steam with natural gas to produce hydrogen and carbon dioxide. The carbon emissions are then captured and stored using a CCUS process.

APPENDIX B:

Parish Profiles

This appendix compiles information on the workforce, economic, and tax impact of industry on local infrastructure, services, and facilities in individual parishes located along the industrial corridor of Southeast Louisiana.



Ascension Parish

ECONOMIC IMPACT

- ➔ Since 2006, Ascension Parish has recorded over \$17.8 billion in capital investment by new and expanding enterprises accompanied by the creation of over 3,677 direct new jobs. *(Source: 2022 Annual Comprehensive Financial Report)*
- ➔ The top 10 property taxpayers in Ascension Parish are all industrial related businesses. Property tax revenues in Ascension fund:
 - Drainage Districts
 - Lighting Districts
 - Health and Welfare
 - Library Maintenance
 - Fire Protection District No. 3
 - Juvenile Detention
 - Animal Control
 - Ascension Consolidated Utility District #1
 - River and Levee Districts
 - School Districts
 - Assessment Districts
 - Law Enforcement Districts
 - Road Districts
- ➔ Almost 24% of property taxes are attributed to industry
- ➔ Three of the top 5 employers are industrial companies:
 1. Ascension Parish School Board
 2. BASF Corporation
 3. Walmart
 4. Shell Chemical
 5. CF Industries



Assumption Parish

- ➔ All of the top 10 highest taxpayers are attributed to industry.
- ➔ 6 of the top 10 largest employers are industrial businesses:
 1. Performance Contractors
 2. Assumption Parish School Board
 3. Turner Industries
 4. Dow Chemical
 5. CF Industries
 6. Assumption High School
 7. Nicholls State University
 8. Shell
 9. Pierre Part Store
 10. APTIM Federal Services



East Baton Rouge Parish

ECONOMIC IMPACT

- ➔ 6 of the top 10 property taxpayers are industrial related businesses. Property tax revenues fund:
 - City-Parish General Fund
 - Economic Development
 - Roads Improvement and Maintenance
 - Sewerage Improvement and Maintenance
 - MOVEBR Improvement and Maintenance
 - School Board Operating
- ➔ Two of the largest 10 employers are industrial businesses.
 1. Louisiana State University
 2. East Baton Rouge Parish Public Schools
 3. State of Louisiana
 4. Our Lady of the Lake
 5. Walmart
 6. ExxonMobil
 7. Blue Cross Blue Shield
 8. Baton Rouge General Medical Center
 9. Turner Industries
 10. Louisiana Department of Environmental Quality



Iberville Parish

ECONOMIC IMPACT

- ➔ The top 10 property taxpayers in Iberville Parish are all industrial related businesses.
- ➔ Sales tax revenues are categorized by Standard Industrial Classification
 - Manufacturers of Chemicals, Industrial Equipment Sales, and Machine Shops & Foundries account for 61.29% of 2022 sales tax remitted.
 - Total dollar amount - \$1,001,604,579 in sales tax remitted
- ➔ Property tax revenues fund:
 - General Operations
 - Library
 - Drainage District
 - Recreation District
 - Fire Protection Districts
 - Public Buildings
 - Public Schools
- ➔ At least 64% of property taxes are attributed to industry
- ➔ 4 of the top 9 largest employers are industrial businesses:
 1. Dow Chemical
 2. Iberville Parish School Board
 3. Turner Industries
 4. Kelly Services
 5. State of Louisiana
 6. Axiall, a Westlake Company
 7. Shintech
 8. Louisiana State University
 9. Walmart



Livingston Parish

ECONOMIC IMPACT

➡ 7 of the top 10 property taxpayers are industrial related businesses.

Property tax revenues fund:

- Law Enforcement
- Parish Government
- School District
- Cities, Towns, and villages
- Fire Districts
- Lighting Districts
- Recreational Districts
- Other Districts

➡ 3 of the top 10 largest employers are industrial businesses:

1. Livingston Parish Public Schools
2. Turner Industries
3. Walmart
4. State of Louisiana
5. ExxonMobil
6. Southeastern Louisiana University
7. Our Lady of the Lake Hospital
8. Oschner Health
9. Louisiana State University
10. APTIM Federal Services

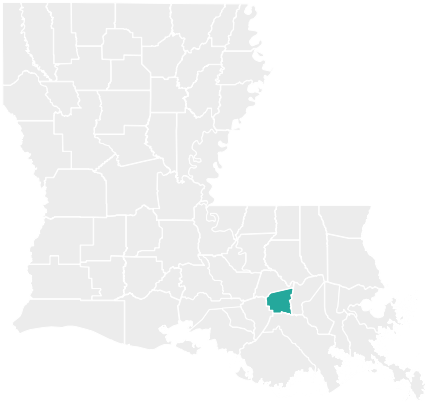


St. Charles Parish

➡ At least 66.8% of property taxes are attributed to industry

➡ Five of the top 10 parish employers are industrial businesses:

1. St. Charles Parish Public Schools
2. Shell Norco
3. Dow St. Charles
4. Entergy, Waterford 3
5. Bayer
6. Valero St. Charles
7. St. Charles Parish Government
8. St. Charles Parish Sheriff's Office
9. Southern Glazer's Wine & Spirits
10. St. Charles Parish Hospital



St. James Parish

ECONOMIC IMPACT

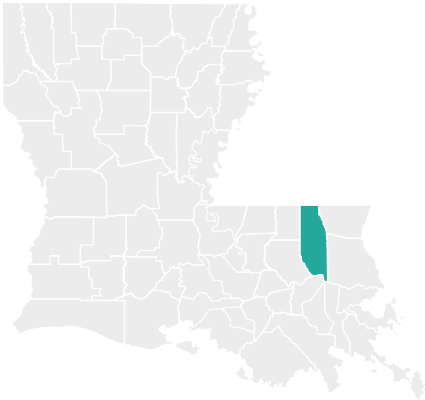
- ➔ The top 10 property taxpayers in St. James Parish are all industrial related businesses. Property tax revenues fund:
 - Sheriff's Office
 - School Board
 - Road Maintenance
 - Parish Council
 - Recreation Districts
- ➔ At least 62.22% of property taxes are attributed to industry
- ➔ Nearly all 10 top employers are industrial related businesses:
 1. ADM Grain Company
 2. AEP Elmwood Marine
 3. Air Products
 4. Americans Syrenics
 5. Associated Terminals
 6. Convent Rail Marine Terminal
 7. El Dupont
 8. Ergon - St. James
 9. Lafarge North America
 10. LOCAP Pipeline



St. John the Baptist Parish

ECONOMIC IMPACT

- ➔ The top 10 property taxpayers in St. John the Baptist Parish are all industrial related businesses. Property tax revenues fund:
 - Operations
 - Debt Service
 - School Board
- ➔ 100% of assessed property tax value is related to industry



Tangipahoa Parish

ECONOMIC IMPACT

- ➔ 6 of the top 10 property taxpayers are industrial related businesses. Property tax revenues fund:

- Parish Council
- Parish School System
- Tangipahoa Educational Facilities improvement District



West Baton Rouge

- ➔ At least 52.7% of property taxes are attributed to industry
- ➔ 5 of the top 10 largest employers are industrial businesses:

1. Dow Chemical
2. Turner Industries
3. ExxonMobil
4. Louisiana State University
5. State of Louisiana
6. Placid Refining Company
7. Our Lady of the Lake Hospital
8. Walmart
9. East Baton Rouge Parish Public Schools
10. Performance Contractors

APPENDIX C:
**Environmental
Non-governmental
Organizations (ENGOS)**

Appendix C: Environmental Non-governmental Organizations (ENGOS)

ORGANIZATIONS GENERALLY UNSUPPORTIVE OF INDUSTRY OR INDUSTRIAL EXPANSION

- [Louisiana Bucket Brigade](#)
- [Earth Justice](#)
- [Rise St. James](#)
- [Inclusive Louisiana](#)
- [Greater New Orleans Interfaith Climate Coalition](#)
- [Deep South Center for Environmental Justice](#)
- [Taproot Earth](#)
- [Earthworks](#)
- [Louisiana Against False Solutions](#)
- [Center for Progressive Reform](#)
- [The Climate Reality Project](#)
- [350 New Orleans](#)
- [Save Our Manchac](#)
- [Rural Roots \(Ascension\)](#)

ORGANIZATIONS GENERALLY SUPPORTIVE OF THE ENERGY TRANSITION

- [Liquid Energy Pipeline Association](#)
- [Ascension Clean Energy](#)
- [Louisiana Mid-Continent Oil and Gas Association \(LMOGA\)](#)
- [Industry Makes](#)
- [Louisiana Chemical Association](#)
- [Lake Area Industrial Alliance \(LAIA\)](#)
- [Greater Baton Rouge Industry Alliance \(GBRIA\)](#)
- [Louisiana Chemical Industry Alliance \(LCIA\)](#)
- [Louisiana Manufacturers Political Action Committee \(LAMP\)](#)
- [Clean Air Task Force](#)
- [Conservatives for Clean Energy](#)
- [Emerging Energies](#)

APPENDIX D: **Other Resources**

This appendix lists compiled resources related to the energy transition that include publicly available fact sheets and videos.

FACT SHEETS AND WHITE PAPERS

- [Industry Makes Resources Library](#)
- [Potential Energy – Talk Like a Human](#) (lessons on how to communicate climate change)
- [LSU Center for Energy Studies whitepaper – What is CCUS](#)
- [LSU Center for Energy Studies whitepaper – what is EJ](#)
- [LSU Center for Energy Studies – The Impact of Carbon Capture and Sequestration on the Economy](#)
- [Clean Air Task Force: Interactive Map of Global Carbon Capture Activity](#)

VIDEOS

- [Ascension Economic Development Corporation Industry Video Series](#)
- [Industry Makes Video and Data Sources](#)
- [LMOGA Capture LA Carbon Website and Video](#)
- [Houston CCS Alliance: Carbon Capture and Storage 101](#)
- [Houston CCS Alliance: CCS A Safe and Proven Technology](#)
- [Houston CCS Alliance: CCS A Three Step Process](#)
- [How Does Carbon Capture and Storage Work \(NewGenCoal in Australia\)](#)
- [Video on EPA’s safety regulations for chemicals](#)

APPENDIX E:
**Products Made Possible
by Louisiana Industry**

EXAMPLES OF HOUSEHOLD PRODUCTS MADE WITH RAW MATERIALS MANUFACTURED IN LOUISIANA

- Clothing
- Paper products
- Furniture
- Bedding
- Mattresses
- Carpet
- Paint
- Detergents
- Toothpaste
- Spandex/elastic
- Tires
- Milk Containers
- Recyclable Food Containers
- Diapers
- Christmas Lights
- Candles
- Plastic Toys
- Paper Towels
- Potato Chips
- Soda Cans
- Sunscreen
- Batteries
- Shoes/footwear
- Trash bags
- Aluminum pots
- Cosmetics
- Lipstick
- Toys
- Balloons
- Shaving Cream
- Computer Screens
- Gasoline (Cars and busses take students to school)
- Rubber Bands
- Storage bins
- Paper Clips
- Glue
- Crayons
- Polyester for Clothing
- Balloons
- Desks and Wooden Furniture
- Cleaning Supplies like bleach, hand sanitizer, glass cleaner, and cleaning sprays
- Plastic components and coatings in book sacks

EXAMPLES OF HEALTHCARE PRODUCTS

- Pharmaceuticals
- Medical Devices
- Prosthetics
- Scrubs
- Disinfectants
- Single Use Medical supplies
- Syringes, blood transfusion bags, IVs
- Ibuprofen
- Inhalers
- Ointments
- Many medications
- PPE
- Masks
- Gowns
- Gloves

