

TEDC 2023 CEDA APPLICATION

All Applications Must Be Received by August 25, 2023

The 2023 CEDA nominations will be judged in each of the five categories that have made the most significant contribution to economic development in their community and the State of Texas.

AWARD CATEGORIES

The CEDA will be given to one community from each of the following five population categories: (as currently marketed). Mark the population category for which you are applying.

- Population less than 10,000 _____
- Population 10,001 to 20,000 _____
- Population 20,001 to 50,000 _____
- Population 50,001 to 100,000 _____
- Population 100,001 to 250,000 _____
- Population 250,001 and above _____

NOMINATION:

Name of Community: _____

TEDC Member Name: _____ (individual member, not organization)

Telephone #: _____

Email Address: _____

Community Population (as currently marketed): _____

Application Submitted By: _____

Email Address: _____

Media Contacts: [optional]

Organization: _____ Contact Name: _____

Email Address: _____

Organization: _____ Contact Name: _____

Email Address: _____

Dow X-energy Partnership for SMR Project in Seadrift, Calhoun County, Texas

The Victoria Economic Development Corporation has been committed to helping create and retain jobs and spur the industrial / commercial development in Victoria and the surrounding area for four decades. We celebrated 40 years of economic development efforts in 2022, as a 501(c)6 organization led by VEDC Board of Directors and Staff with investment support from the private sector business community and public sectors of the City of Victoria – Victoria Sales Tax Development Corporation, Victoria County, and the Port of Victoria.

A thoughtful and conscious decision was made by leadership of adjacent communities to formalize the collaborative attitude toward regional economic development by entering contracts for services between VEDC and governmental entities outside of Victoria County, including: the City of Edna, Calhoun County, and the Calhoun County Port Authority. We are working with additional regional partners as well to better leverage assets and serve a broader business community with retention and expansion efforts. VEDC is now formally a regional partnership organization.

On May 11, 2023, Dow and X-energy announced the location of their Xe-100 small modular reactor (SMR) deployment project to be at Dow's Union Carbide Corporation Seadrift Operations manufacturing site in Calhoun County, Texas. The SMR project at the plant site will transform how the plant generates their power. The current aging power generation system will be replaced with a clean, reliable, and safe source of nuclear power to produce steam to run the chemical manufacturing plant with the potential for excess power to return to the grid. The project is part of the US Department of Energy's (DOE's) Advanced Reactor Demonstration Program (ARDP) and represents an estimated capital investment of over \$2 billion with the creation of 110 new, high-wage jobs at the Calhoun County facility.

The Seadrift site was Dow's first location for a chemical facility in Texas back in 1952, and providentially, now will be the first in Texas chosen to deliver nuclear powered steam production with zero carbon emissions at an industrial site. The history of the company notes the work ethic of the local workforce, land, and utilities as factors in a decision to locate the plant in Seadrift. What began nearly 70 years ago has expanded to cover more than 4,700 acres today with 1,000+ employees. The operations at Seadrift have transformed the lives of generations of families in South Texas. The investment Dow is making in the existing facility brings assurance of jobs for the future of the region.

Consistent and redundant power at the plant site is necessary to produce more than 4 million pounds of materials per year that is used in a wide range of applications from food packaging to solar cell membranes, to medical and pharma products. Businesses and governments around the globe are striving to be more environmentally responsible operators and seek ways to reduce emissions that negatively impact our lives. Congress passed legislation to invest in a clean energy supply and the DOE selected X-energy as a recipient to demonstrate their advanced nuclear reactor. Since 2021, X-energy has been advancing their technology and production of the TRISO-X fuel cells to be used in the Xe-100 reactor at the Dow Seadrift site.

Dow announced interest in advanced reactors for its U.S. production sites in April 2022 and signed a letter of intent with X-energy in August 2022 to deploy the Xe-100 at one of its Gulf Coast facilities, to be operable by about 2030. In March of this year, the companies signed a joint development agreement (JDA) for the project. As part of the agreement, Dow became a sub-awardee under X-energy's ARDP Cooperative Agreement with the DOE. The change officially made Dow X-energy's "customer/partner" under the ARDP award. It also positioned the high temperature gas cooled reactor (HTGR) demonstration to become the first grid-scale advanced reactor at an industrial site in North America. The JDA provides for up to \$50 million in engineering work, up to half of which is eligible to be funded through ARDP, and the other half by Dow.

Texas is widely recognized as a leading source of traditional energy solutions – providing more power than any other state, and more than 10% of the net electricity generated in the country. The state is also on the cutting-edge of innovative, zero-carbon solutions. In fact, Texas is the largest producer of renewable energy in the country, making it the perfect location for X-energy’s advanced small modular reactor (SMR) nuclear project. The competitive site selection process within Dow’s facilities resulted in Dow’s confidence in their Seadrift Operations workforce and the decades long support of the community influenced their decision to demonstrate the nuclear project in Calhoun County.

“Texas is the energy capital of the world, and Dow and X-energy’s decision to choose Texas as the location for their new SMR nuclear plant is a testament to our state’s exceptional business climate and history of innovation in this critical industry. This SMR project further cements Texas’ position as a global energy leader and will bring good-paying jobs and more economic opportunity to hardworking Texans in the Coastal Bend. I look forward to working with Dow and X-energy as we continue to unleash the full potential of our state’s mighty energy industry.”
– Governor Greg Abbott

The VEDC staff engages with existing industrial businesses, including Dow Seadrift, as part of a regional approach to our BRE program. We are pleased to bring potential projects before the governing entities for consideration of incentives. Calhoun County Judge Richard Meyer joined the VEDC Board of Directors upon a contract for services agreement in early 2023. VEDC was pleased the Calhoun County Commissioner’s supported the project with an incentive. Site selection was a critical part of the license preparation and submission process with the Nuclear Regulatory Commission.

INNOVATIVENESS

The advances made by X-energy in the field of SMR for commercial and industrial applications has set the stage for a new generation of dispatchable clean power. They are making great strides in turning advanced nuclear power into the default technology for global, zero-carbon emissions energy. The partnership with Dow will showcase the unique versatility and wide range of applications of the Xe-100 advanced small modular nuclear reactors for energy production and manufacturing. It will serve as a model for decarbonizing industry around the world.

X-energy was selected by the DOE in 2020 to develop, license, build, and demonstrate an operational advanced reactor and fuel fabrication facility by the end of the decade. Since that award, X-energy has completed the engineering and basic design of the nuclear reactor, has begun development and licensing of a fuel fabrication facility in Oak Ridge, Tennessee, and is now working with Dow to prepare applications to the NRC for Construction Permits at the Seadrift site. Dow and X-energy expect the project to reduce the Seadrift site’s emissions by approximately 440,000 metric tons of CO₂ equivalent per year. Permitting for the construction of the facility with the Nuclear Regulatory Commission has begun. Construction on the four-unit project is expected to begin in 2026 and be completed by the end of this decade.

The SMR plant will consist of 4 Xe-100 units, which are 80-MWe high-temperature, gas-cooled reactors that will be scaled into a four-pack 320-MWe power plant. Instead of rods utilized in a traditional nuclear reactor, the Calhoun County plant will use TRISO particles encased in graphite pebbles as fuel and helium as coolant. Capable of providing high-temperature steam at 565°C as well as electricity, the Xe-100 could enable decarbonization of industrial end-use applications, including hydrogen generation, oil sands operations, mining applications, and other industrial processes.

The Dow / X-energy partnership is the first of its kind and will serve as a demonstration project for industry to incorporate. Additionally, Governor Abbott has called for the PUC to study how to make best use of the SMR technology as an answer for Texas' need for new safe, reliable, clean power generation.

This project announcement is also a testament to the success of a regional approach to economic development that has been practiced by VEDC over the past year.

TRANSFERABILITY

The Dow X-energy project is a game-changer for Calhoun County, Texas and our region of the State. The success of the project will also lead to implementation of additional SMR projects around the state. The advances in workforce training necessary to meet the skills development of the next generation of new nuclear operators and technicians will ripple across the state's workforce training partners.

We anticipate the success of the X-energy SMR at the Dow Seadrift site will lead the other six major industrial operators in our region to consider implementing nuclear energy as a clean power source for aging power generation infrastructure within their sites.

"It is with tremendous pride that we bring this innovative technology to only a short drive from the energy capital of the world to the state of Texas. I do believe the technology that we will demonstrate here will be the first of many hundreds of plants that are built not just in Texas, around the United States around the world. What is happening here in Texas really will change the world,"
– Clay Sell, X-energy, CEO

The project also represents two of the most important aspects of our profession as economic developers; relationships built on trust, and an established and operating Business Retention and Expansion program.

As VEDC formally expanded our practice and engagement to include the Calhoun County Judge Richard Meyer on our Board of Directors, communications and face-to-face engagement grew. This has fostered a mutually beneficial spirit of cooperation to work closely together for the good of all in the region.

Our relationships with Calhoun County government and Dow business leaders allowed us to add value and expertise to help advance the tax abatement incentive, a critical component to the competitive site selection process. Our long-held relationships with a significant legacy regional employer at Dow provided us the opportunity to timely respond to data requests and follow up on pressing items. Open and honest communication is key with dedicated follow up to any request for information.

COMMUNITY COMMITMENT AND LEVERAGE

Calhoun County Commissioners unanimously supported the Dow X-energy project with a 10-year, 100% tax abatement. Dow has a history of being a great community partner and X-energy has pledged to make improvements to the County Youth Agriculture Education facilities.

Skills Development Fund Grants may also be utilized through Victoria College, the region's premier workforce training partner.

"We are excited that Dow has chosen its Seadrift site for this innovative technology and investment. Calhoun County welcomes this economic development and we appreciate Dow and X-energy's willingness to engage the community regarding the benefits and safety of the project."
– Calhoun County Judge Richard Meyer

MEASURED OBJECTIVES

The project represents an estimated capital investment of \$2 billion. X-energy will be providing \$1.35 billion and Dow is investing \$650 million. There will be 110 new high wage jobs created and up to 1,800 temporary construction jobs will be created at the site to support the projects. Further, the project is projected to have an economic impact of over \$233 million in Calhoun County over the next ten years and create an additional 216 indirect jobs.

SECONDARY BENEFITS

VEDC and Calhoun County leadership anticipate industrial tourism to the community to increase following the demonstration of the SMR at the Dow Seadrift facility.

Our local community college, Victoria College, serves the region as the premier workforce development facility and is prepared to enhance coursework and job training programs in preparation of the new technology that will be used at the Dow Seadrift facility.

With the development of X-energy at Dow Seadrift, and the established DOL Dow Apprenticeship program, a stronger pipeline of future talent of workforce ready individuals will be created. The local ISDs in addition to our local community college have begun conversations that when appropriate, they will begin executing curriculum and ensuring HB1 and HB4451 from the 2023 legislative session are utilized.

"It's going to be a great benefit to the citizens of the County. It'll bring sales tax dollars to the county from people spending money at hotels, RV parks, restaurants, and housing. It should bring a considerable economic boom. As for the nuclear facility, it's cutting-edge technology that's being deployed here that has the backing of the Department of Energy. It's energy for the future and once this gets designed and constructed on the ground, it will help the nation provide better resources for clean power. It's great news to see when we get anybody into our county. We certainly appreciate Dow bringing the project to us and wanting to give back to the county and surrounding communities."
– Calhoun County Commissioner Gary Reese

In anticipation of a greater influx of commuters TxDOT has committed to improving TX-185 by developing a much needed overpass. This will allow for safer logistical navigation to and from the site for commuters living near US Hwy 59 (future I-69). The entire region will prosper from the continued growth at Dow Seadrift.