1.0 COALITION VISION:

The overarching vision of the Utah Energy Diversity and Innovation Cluster Coalition (UEDI) is to transform rural Utah’s economy from deep dependency on coal mining and coal-powered energy to an interstate regional producer of diverse, reliable, low-carbon power and energy technologies. UEDI’s strategic approach will scale advanced energy technologies, high-paying workforce opportunities that leverage the skilled talent pool and regional assets, and wrap-around support services for workforce transition to ensure economic growth and equity.

Supported by the four critical pillars of research, manufacturing, entrepreneurial support and workforce, UEDI seeks to align transformational projects that support energy diversification and innovation throughout Utah’s rural coal counties. See figure 1. Research will focus on energy production, management, and storage technologies that have the capability to provide consistent baseline energy for Utah and the Western U.S., as well as non-fuel domestic manufacturing supply chain uses for coal and critical minerals. Manufacturing applies artificial intelligence and smart technologies to the commercialization of energy technologies and their relevant waste stream and supply chains, while providing infrastructure and facilities to support the growth of a rural manufacturing base. Entrepreneurial Support gives individuals and small businesses technical assistance and wrap around services to enhance the likelihood of success for a vital group in the regional ecosystem. Workforce centers on people as a resource, creating new career opportunities for the skilled labor force, establishing training and credentialing programs that support the transitioning energy industry and its related technologies, and providing support services to address the ancillary needs of displaced workers. As a central piece of the UEDI strategic approach, Equity is embedded in all pillars and throughout the practices and processes of the UEDI activities. The UEDI Equity and Opportunity Advisory Council will operate to ensure community outreach, wrap around services, and training serve disadvantaged populations in the region. The Advisory Council, which will be led by trusted community leaders and representative of indigenous people, women, aging populations and the persistently impoverished is tasked with providing transparency, seeking community input, as well as creating and tracking meaningful metrics that capture intended and potential unintended impacts.

UEDI is geographically focused on Utah’s rural South, Southeast, East and Central region with an emphasis on the communities that are over-reliant on coal jobs, and as a result face serious economic distress. This scope could also grow to serve Southwest Colorado, Northeast Arizona and Northwest New Mexico as partnerships expand.

Developed by local community leaders and based on regional planning documents including CEDS, UEDI is uniquely positioned to develop the Energy Diversity and Innovation Cluster, ensuring that regional assets and community-based strategies are foundational to the proposal and that funding is deployed to maximize support to Utah’s coal communities and surrounding counties. UEDI is a strong alliance that includes State and local government, as well as higher education, and is industry driven and private-sector led with key industry partners that bring matching funds and commitments to support the community. The UEDI Coalition is grounded in established policy and statewide support. In 2017, the Utah Governor’s Office of Energy
Development formed an Energy Action Plan which outlined goals to target rural business development, support energy research, expand education initiatives and expand regional engagement. The UEDI Coalition is a natural result of this effort and is reflective in its partnerships and projects. Correspondingly, the Utah Office of Energy Development will be the UEDI lead organization. UEDI is consistent with EDA Investment Priorities of Recovery and Resilience, Equity, Workforce Development, Manufacturing, Technology-Based Economy.

2.0 ECONOMIC OPPORTUNITY

**Problem Statement:** Utah faces an economic and energy crisis as national and global stakeholders turn away from coal as an energy source. Coal mining and coal-fueled electricity generation jobs represent about 5% of the direct employment in Utah’s coal-dependent counties. Coal jobs are high paying, with 2017 average annual earnings of $105,500, double the statewide average of $50,655. Utah’s 2017 coal production generated economic impacts of 1496 direct jobs and 3731 indirect jobs, $157 million in direct earnings and $185.2 millions in indirect earnings, and $309.7 million direct in state GDP. 2015 saw the closure of the Carbon Power Plant. In 2020, Carbon County had a job loss of 2.1%, corresponding to 194 positions in total. The largest job losses in the county occurred in the mining sector. Emery County will face similar job loss trends in the coming years as The Hunter and Huntington plants are scheduled to close in 2042 and 2036 respectively and increasing pressure to rapidly decarbonize may bring those deadlines closer. Rural southeastern Utah has suffered from a decade-long recession due to coal production decline, impacting more than 2,000 jobs and $29 million in annual revenue. The coal downstream supply chain is also affected by changes in the coal economy.

Especially concerning is negative growth rates in population and labor force participation. In Carbon and Emery counties, population growth is -3.0% and -7.6%, respectively. The labor force participation has declined by 17.1% and 17% in the past 10 years, respectively. Neighboring counties, San Juan, Grand and Uintah, who are impacted by the downturn in the coal economy have seen unemployment rates over the past 12 months that are higher than the national average at 10.2, 9.5, and 9.2, respectively. Significantly, The UEDI region’s Per Capita Personal Income is $36,858, an astounding 65.2% of the US threshold of distress at $56,490.

Investment in Utah’s coal communities is critical to the UEDI region which was already facing an economic crisis of shrinking revenue, falling property values, and dislocated workers before the coronavirus pandemic compounded the preexisting economic distress and highlighted the need for multiple economic and workforce development interventions. Realistically, economic diversification requires large investments and thus significant external support for already-struggling coal-dependent communities and workers. Energy and economic diversification is critical to combat consequences of production decline, provide innovative job growth, increase product development, commercialization, and remove barriers for aspiring entrepreneurs. **Opportunity:** The Governor’s Office of Economic Opportunity (GOEO) Office of Rural Development Guide, estimates that the impact of creating one job in a rural county in Utah can be expressed in an equivalent number of jobs created in urban counties. For example, one job created in Carbon

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5 Utah Department of Workforce Services
County has the same relative impact as 99 jobs created on the Wasatch front. Duchesne is 143 jobs, Emery is 273, Grand is 203, San Juan is 205, and Uintah is 81.7.

As an economically distressed area according to EDA definition, the UEDI region will greatly benefit from EDA's investment. The proposed scope of work will provide Utah coal counties with immediate actionable implementation steps to economically diversify the region’s economic base, transitioning to energy diversification and innovation. The UEDI coalition will leverage public/private partnerships, retain population, train and upskill workers, and generate equity for underserved populations.

3.0 COALITION MEMBERS

Coalition Lead Entity: Utah Office of Energy Development (OED)

Role and Activities: As the lead for the UEDI Coalition, OED will facilitate collaboration and outreach to current and future partners in industry, education, and communities. OED will ensure projects are aligned with cluster pillars and will emphasize and embed equity strategies for the region. OED will provide administrative expertise and policy oversight and hire and manage the Regional Economic Competitiveness Officer and participate in community outreach and the UEDI Equity and Opportunity Advisory Council. The strategy to hire the Regional Economic Competitiveness Officer is to hire, from within OED, the highest qualified candidate with the skills necessary to fulfill the EDA requirements.

Coalition Member: Emery County

Role and Activities: Emery will own and develop the San Rafael Energy Research Center (SRERC) and Manufacturing Industrial Park. They will specifically market SRERC and actively recruit industry to relocate to Carbon and Emery Counties.

Coalition Member: Southeastern Utah Economic Development District

Role and Activities: SEUEED will develop and support the Entrepreneurial Ecosystem Support Center (EESC) and the Training and Transitioning Workforce project to diversify job opportunities

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7 Utah Department of Workforce Services, 2016. Analysis based on the goal of reducing unemployment by one-half percent. Statistics based on county labor force, the current rate of unemployment and the extrapolated number of jobs required. The average number of new jobs in rural to reduce unemployment by one-half percent is 408. The average number of Wasatch Front jobs to reduce the unemployment by one-half percent is 5,851.

https://issuu.com/goed/docs/utah-ord-2018-program-guide (page 3-4) see attachments
for the region. SEUEED will oversee equity support services for the region and implementation and buildout of the Entrepreneurial Ecosystem Support Center and regional coworking spaces for workforce diversification. **Coalition Member: University of Utah (U of U)**

**Role and Activities:** The U of U will develop, install, monitor, and maintain multiple AI technology projects located at manufacturing, power generation, and mining facilities in the region. They will provide initial scoping, provide R&D support, and help design a remote monitoring system architecture. They will create a centralized technology support hub, headquartered at the Industrial Park adjacent to the SRERC.

**Coalition Member: Weber State University (WSU)**

**Role and Activities:** Weber State University will collaborate on Training and Transitioning Workforce through curriculum development and articulation for electric vehicle (EV) technician training programs. Curriculum will be deployed at high schools and technical colleges in Utah.

**Coalition Member: Utah Advanced Materials Manufacturing Initiative (UAMMI)**

**Role and Activities:** UAMMI will market and recruit manufacturers to facilities located in Emery and Carbon County, assist in implementation of strategies and vision for the manufacturing facility, identify and match research opportunities, and integrate equity through the manufacturing sector in the UEDI region.

4.0 CLUSTER COMPONENTS AND 5.0 PROPOSED METRICS

The UEDI projects have an interconnected alignment with the coalition vision and its supporting pillars of Research, Manufacturing, Entrepreneurial Support, and Workforce. These components are industry driven, are already in motion, and have job and economic impact as their purpose. The UEDI lead organization, OED, will collaborate with key industry partners, coalition members, and their respective initiatives to take these complementary components and foster an overall cohesive work that will transform the Energy Diversification and Innovation Cluster and will propel Utah into the future of economic and energy leadership.

**Component #1—Advanced Energy Research:** The San Rafael Energy Research Center investment in the UEDI cluster will facilitate testing and technologies that allow clean energy resources to be commercialized locally and globally. This project targets economic diversity, job creation, educational opportunities, research and development of innovative processes, technologies and products within the energy industry and advancing new, clean energy technologies.

**Metrics:** The return on this investment will be the development of energy cluster jobs. Utah has a growing number of available jobs in the energy sector. The SRERC commits to provide industry partners to assist in workforce development, curriculum, and job placement to fill available jobs.

**Component #2—Smart Manufacturing Commercialization and Innovation Center:** This investment in the UEDI cluster includes a 140-acre industrial park co-located with the SRERC that will create space for private enterprises to locate and expand operations that align with the activities of the SRERC. This component will also have a centralized technology support hub, headquartered at the center, that will develop, install, monitor, and maintain multiple AI technology projects located in the UEDI region in manufacturing, power generation, and mining. UAMMI will play an integral role in the project by connecting industry, providing input into strategic planning, fostering collaboration, identifying research opportunities, and strengthening the ecosystem of manufacturing in rural communities. Activities will include training programs, outreach, recruitment of underserved populations for workforce, expanded use of the CONNEX tool, convening industry partnerships, fostering research collaboration, providing technical assistance to businesses, and commercialization assistance for uses for non-fuel coal products.

**Metrics:** The return on this investment will be high income private sector job opportunities, including technology and manufacturing, as research applications attract business. Also, UAMMI brings hands on expertise in the manufacturing industry, including employer recruitment and equity offerings.
Component #3—Entrepreneurial Ecosystem Support Center (EESC): This investment in the UEDI cluster will consolidate and streamline assets, programs and wrap around services for entrepreneurs, small business owners and underserved populations with an emphasis on equity and inclusion of women, indigenous, aging, and persistently impoverished people in the region. Outreach, increasing awareness of services, and removing barriers for success are vital activities for this project. EESC will make connections between the housing, transportation, community and human service programs and economic development planning services, ensuring small businesses, owners, entrepreneurs and workers have access to ample educational and job opportunities. 

Metrics: The return on this investment will be direct services to the region and its distressed and underserved populations (12-31% poverty rate). EESC will house 40 partnering organizations and be accessible to the rural service areas in and around southeastern Utah.

Component #4—Training and Transitioning Workforce
This investment partners UEDI industry partners with educational institutions to create curriculum aligned with regional workforce demands; set up internships, apprenticeships and job shadow opportunities; provide responsive education pathways such as, evening courses, 2-year certifications, and scaffolded degree programs. The ongoing partnership between SEUALG and Utah State University Eastern, as well as the new partnership with Weber State University, will contribute to the workforce development needed for longevity and growth. The primary focus of this project will be to enhance opportunities for workers and/or students to qualify for high-tech, high-wage careers that leverage skills they already possess or can easily be trained in. Examples of workforce initiatives to retain, train and transition energy workers and keep the region workforce growing are the development of an Electric Vehicle (EV) Technician Training program, an Aircraft Maintenance Technician program, and possibly a 3D Printing and Manufacturing program. UEDI will be guided in support of workforce programs that support the pillars of the energy diversification and innovation cluster, as well as programs that support the transitioning of displaced coal workers into other high-paying local occupations.

Metrics: The return on this investment will be job training and transitioning to high wage jobs and the ability to scaffold certificates to degrees for workers/students in the UEDI region. The multi-skilled workforce will be able to respond to opportunities in manufacturing, energy, production and other skilled trades.

6.0 Matching Funds
Each of the coalition components have accessible matching funds brought to them by industry, local and state government, and private support. Total matching funds available for the UEDI coalition projects is $11,654,769.

7.0 General Timeline
Phase I will included planning, engineering, environmental assessments and Equity and Opportunity Advisory Council Activities. Some construction has already begun on the San Rafael Energy Research Center and all construction will be concluded by the end of the Phase II grant period.

8.0 Barriers to Success and Mitigation Strategies:
UEDI Coalition is considering all barriers across projects. Unforeseen events, such as what was experienced with COVID19, are a potential barrier for implementing the proposed plan. Other barriers include timing for the development of the smart manufacturing or industrial park, supply chain disruptions in the development of the facility, or labor shortages due to Utah’s gap in the construction workforce. Mitigation strategies are also being considered across projects. Strong alliances between industry, higher education, local government and the community at large will help in lessening barriers and easing the burden to any one partner. Working as a coalition will enable barriers that arise to be quickly reduced and a strong lead organization will assist to enhance collaboration.