

Overarching Narrative

Synopsis

The Hopi Tribe (the Tribe) seeks \$100 million for (5) projects in BBBRC Phase 2 funding for the transformation of its coal-dominated economy into a regional economic cluster focused on solar photovoltaic (PV) power. Building on efforts in BBBRC Phase 1, the Tribe will further develop the mechanics of transitioning from coal to solar power; build a Tribal solar workforce; construct new utility infrastructure; and plan innovative, clean energy projects.

The Hopi Tribe is a federally recognized Tribe with a Reservation encompassing more than 1.5 million acres in northeastern Arizona. For the past 40 years, the Tribe's economy has been driven by coal-related operations, creating dependence on a single economic engine. This may have worked for a long time, but **in 2019, coal-related operations ended abruptly** with the closure of the Navajo Generating Station (NGS) and the associated Kayenta Mine. This translated into about **1,360 to 1,904 total jobs lost and an 85% reduction to the Tribe's revenue**. Hopi needs new economic development to replace the lost jobs and economic value associated with the coal closures.

Unfortunately, the **Tribe's Reservation is isolated and lacks reliable infrastructure**, which prevents most economic development opportunities. The **Tribe also lacks capital** to invest in new economic opportunities. These issues have been compounded by the COVID-19 pandemic. For many of the same reasons that prevent economic development (e.g. isolation, lack of reliable infrastructure, and lack of capital), the **Tribe has been disproportionately impacted by the pandemic**¹. EDA's Phase 2 BBBRC funding would provide the Tribe much-needed capital to implement projects that transition its economy beyond the coal closures and COVID pandemic.

Phase 2 BBBRC funding will help Hopi rewrite its energy story; The 5 component projects would allow the Tribe to achieve its vision of a Hopi-led clean energy transition. Projects identified in Phase 2 are designed to rebuild the Tribe's revenue around the development of a solar power economic cluster, physical electric infrastructure, and sustainable, well-paying jobs. This will address the significant job loss within our Hopi communities by not only creating jobs, but by building capacity through workforce training and development. During our Phase 1 efforts, and as a testament to the Tribe's resilience, Tribal leadership has led an unprecedented planning effort to support the Tribe's EDA BBBRC concept. Hopi Utilities Corporation (HUC), with the delegated authority from Tribal Council, has united a Hopi-led coalition that includes two universities and many industry partners. The five component projects that comprise Hopi's clean energy transition directly addresses the Tribe's immediate economic development needs while laying the foundation for sustainable economic development opportunities.

The vision for the five projects outlined below aligns with the CEDS and will rewrite the Tribe's energy story by transitioning from coal to solar power, developing a Tribal solar workforce to create well-paying jobs for Tribal Members, building new utility infrastructure to improve growth capacity and reliability to Tribal homes, businesses, and remote customers on Reservation and planning innovative clean energy and infrastructure projects that leverage the Tribe's strengthened internal capacity, workforce, and modern infrastructure to spark economic development on Reservation. A

¹ <https://www.usccr.gov/files/2021/05-19-AZ-Memo-COVID-19-Native-Americans.pdf>

core theme throughout all component projects is to empower the Tribe by avoiding the mistakes of the past that put the fate of the Tribe's economy in a single industry controlled by non-tribal entities that were extracting the Tribe's energy resources. A visual of the project concept can be found in the attachment "*Visual Overview of Hopi's Clean Energy Transition*" and on the website www.hopicleanenergytransition.com.

Component Project	Description and Justification	Requested Budget
<p>Project #1: Large Hopi-Owned Solar Project</p>	<p>What? A 40 MW-dc of solar PV with the capacity to increase to 500 MW-dc. Why? Hopi's solar resource potential represents 60x the capacity of the coal plant that recently closed. It is one of the Tribe's best economic assets and can replace the revenues & jobs lost from coal closures.</p>	<p>\$61.3 Million</p>
<p>Project #2: Tribal Solar Workforce Development Program</p>	<p>What? A Tribal solar workforce training program that will train 24 Tribal members to support current and future solar projects for the benefit of the Tribe. Why? Hopi's solar resource potential represents a long-term opportunity for job creation on Reservation in the wake of coal closures.</p>	<p>\$2.0 Million</p>
<p>Project #3: Substation and 21 kV Line to Improve Electric Service</p>	<p>What? A new 500 kV substation and 11.9 miles of 21 kV distribution line along Highway 264. Why? Hopi's electric system is lacking and unreliable. This impacts quality of life on Reservation and prevents economic development opportunities. This project improves the access to and the reliability of the electric service along the Tribe's main corridor.</p>	<p>\$33.6 Million</p>
<p>Project #4: Remote Solar Microgrid</p>	<p>What? A 242.5 kW-dc solar PV system with a 224/448 kWh battery energy storage system to provide electricity to water infrastructure that serves Upper Moenkopi. Why? Upper Moenkopi's insufficient water supply is its main barrier to economic development. Unfortunately, the only suitable location for improved water infrastructure is remote and lacks access to electricity. This project installs an advanced microgrid to deliver electricity to the new water infrastructure.</p>	<p>\$1.6 Million</p>
<p>Project #5: Sustainable Economic Development and Infrastructure Master Planning</p>	<p>What? A partnership with regional universities focused on maximizing the Tribe's economic development opportunities from solar and the resiliency benefits from the new infrastructure. Why? Despite the transformational change associated with Component Projects 1-4, there is still planning work Hopi needs to complete in order to capture the fully benefits of the Tribe's vast solar resource and new infrastructure.</p>	<p>\$1.5 Million</p>
Total Funds Requested:		\$100 M

The value of the projects directly benefits an underserved population, in an underserved community, that is directly affected by economic consequences of coal closures. EDA's investment priorities include equity, recovery, workforce development, and environmentally sustainable development. Hopi's project fully embodies these priorities. The project is focused on the Tribe's People on the Tribe's Reservation, which is larger than the state of Delaware. The population that is the focus of this project is underserved: 98% of the population on Reservation identifies as American Indian². The geographical region that is the focus of this project is underserved: 31% of the population on Reservation is below the poverty line, more than double the national average of 13.4% and almost double the Arizona average of 18%. This initiative implements projects that build Hopi's economic resilience in the face of coal closures and the COVID pandemic. The Tribe is arguably one of the most vulnerable communities in the country dealing with recent coal closures. The Just Transition Fund's Coal Power Plant Risk tool³ shows the Hopi Reservation is the within the most vulnerable area because of the combination of coal closures, geographic isolation, education level, and poverty level. Lastly, workforce development and environmental-sustainability are central goals of Hopi's initiative.

The projects are structured to unlock significant additional value in two major ways:

First, it integrates with complementary initiatives that bring additional (non-electric) infrastructure to provide the required building blocks of economic development. Specifically, the Tribe developed and submitted a grant application for a significant Tribal broadband project under the National Telecommunications and Information Association (NTIA) Tribal Broadband Connectivity Program grant. This *project aims to install broadband infrastructure along the same Highway 264 corridor that is the focus of Component Project 3*. This complimentary project allows for efficiencies in the permitting phase and Arizona DOT right of way approvals. In addition to improved broadband infrastructure, the Tribe is planning and deploying new water infrastructure across the Reservation. The combination of these complimentary infrastructure initiatives would position Hopi to significantly improve its ability to attract economic development opportunities along its Highway 264 corridor.

Second, the projects are structured to generate additional value for the Tribe

Hopi's component projects will provide immediate value to the Tribe. The 40 MW solar project would be one of the largest solar projects wholly-owned by a Tribal entity and it would generate a new revenue stream of approximately \$2.1 million that the Tribe needs in the wake of recent coal closures. The ultimate goal is up to 500 MW of solar at the site and a similarly-sized co-located data center. The workforce development program is similarly able to scale to create additional opportunities for employment. The team has set a realistic goal of 24 Tribal Members for the large solar project. However, the team believes the workforce development program can be expanded over time and take advantage of the gigawatts of solar under development in the region on Navajo and Hopi land. The coalition is exploring options to unite the Tribal Member training activities for both Navajo and Hopi Tribal Members.

The coalition is united, motivated, and highly capable of executing the project. The Hopi-led coalition brings together organizations from the Reservation, as well as the region. The team spent considerable time during the Phase 1 BBBRC project to bring on additional partners and was able to

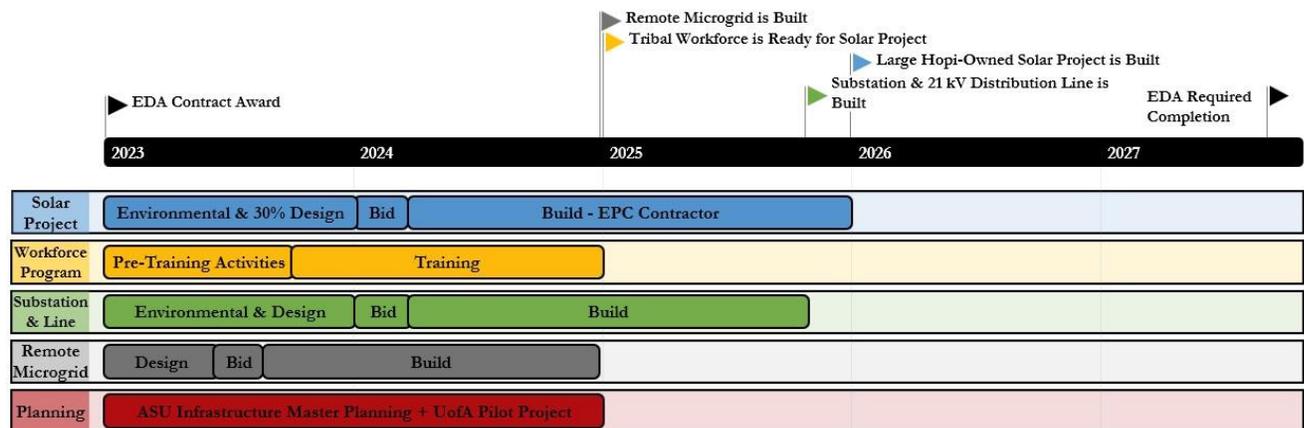
² <https://in.nau.edu/wp-content/uploads/sites/212/The-Hopi-Tribe-2011-2015-Demographic-Profile.pdf> ³ <https://www.justtransitionfund.org/where-we-work>

secure additional commitments from the universities. The project team is comprised of the following members and partners:

Coalition Member:	Role
Hopi Utilities Corporation	Lead institution and lead applicant for each construction project
Native Renewables Inc.	Lead workforce development program
Partners:	
Hopi Villages	Provide local Tribal government input
Hopi Tribal Departments	Provide Tribal departmental support for component projects
University of Arizona	Assess potential of agrivoltaics for future solar projects
Arizona State University	Support village engagement for infrastructure master planning
Woven Energy LLC	Provide energy planning, development, and management expertise
Arizona Public Service	Provide necessary support for solar project and
Labor	Coordinate with workforce development program
Data Center Developers	Co-locate a new facility & purchase solar power
Solar Developers	Provide capital to expand solar project up to 500 MW
Funding Partners	Provide funding to expand solar project up to 500 MW

All projects will be completed before September 2027. A simplified overview of the schedule is depicted below. Additional details can be found in the *Hopi Clean Energy Transition: Scope & Schedule* attachment.

Hopi’s Clean Energy Transition: From Coal to Solar with a Focus on Jobs & Local Infrastructure Simplified Schedule



Geographical Region Served

All component projects are within the Hopi Reservation – a coal community. The projects are located within Navajo (FIPS code 04017) and Coconino (FIPS code 04005) counties. The region is isolated from urban areas, with Flagstaff being the closest economic center, located about 100 miles

away from the main Reservation. The Hopi Tribe's total membership is approximately 14,390 of which about 7,800 live and work on the Reservation. **The majority of residents that live on Reservation live along the Highway 264 corridor that is central to the component projects.**

There are 12 Hopi Villages that would be engaged as part of the initiative. The villages are organized into four clusters, as summarized below and illustrated in the *Visual Overview* attachment:

First Mesa:	Second Mesa:	Third Mesa:	Moenkopi:
1. Tewa	4. Sipaulovi	7. Hotevilla	11. Upper Moenkopi
2. Sichomovi	5. Mishongnovi	8. Bacavi	12. Lower Moenkopi
3. Walpi	6. Shongopavi	9. Oraibi	
		10. Kykotsmovi	

Overview of Private-Sector Engagement

Attracting the private sector to the Reservation has historically been challenging. This project seeks to change that paradigm. Despite a strong desire to attract the private sector to the Reservation, the isolated geography and lack of reliable infrastructure preclude most private companies from making investments on Reservation. By leveraging the Tribe's vast solar resource, improving infrastructure, and developing a Tribal solar workforce, the Tribe seeks to create economic value from its vast solar resource and attract large businesses to the Highway 264 corridor.

Conversations with the private sector in BBBRC Phase 1 have reaffirmed the paradigm shift. In Phase 1 of the BBBRC project, the Hopi coalition has made considerable progress engaging the private sector. Specifically, the team is advancing negotiations related to co-locating a large data center that would purchase solar directly from the Hopi-owned project. A private sector customer like a data center needs reliable electricity and internet connectivity. The Hopi team has outlined the plan for the solar project site, new fiber, and a new substation. The team has also reviewed the preliminary economics associated with these projects in terms of a power purchase price. These conversations have validated the assumption that **the combination of low-cost, clean solar power and the significant delivery capacity of the substation are very attractive to data center developers.** Although reaching final terms was not possible within the three-month timeline associated with the BBBRC Phase 1 project, the Hopi coalition made considerable progress and was able to reach initial terms documented in Letters of Interest (LOI) with two data center developers that are actively engaged with the Tribe to potentially invest in a facility co-located on the solar project site. This would unlock significant additional value from the Hopi solar project and substation project (see the *By The Numbers* attachment).

Hopi has also validated assumptions related to hiring commitments and philanthropy support. In the BBBRC Phase 1 effort, the Hopi coalition also made considerable progress confirming that the private sector companies that would be involved in the construction and maintenance of the solar project are 1) very interested in the project and 2) very supportive of hiring Tribal Members that are trained through the workforce development program. Because the solar project will be competitively bid, a specific commitment is not possible; however, discussions with engineering, procurement, and construction firms have validated the total number of jobs created, as well as realistic goals for Tribal trainee hiring. Similarly, the Hopi coalition engaged with potential funding partners that could provide financial support for two main areas:

- 1) *expanding the solar project from 40 MW to up to 500 MW and*

2) *supplementing the workforce program by paying trainees and/or providing funding support to expand the program*

Similar to the positive feedback related to hiring commitments, potential funders have expressed intense interest in supporting Hopi's clean energy transition. They understand the strong statement of need, they understand Hopi's project concept, they believe in the long-term viability of the project, and have all expressed an interest in entering more detailed discussions as the project advances, as stated in their letters of support.

Regional Growth Cluster Sustainability

The solar project revenues provide a funding stream to support financial sustainability.

Hopi's clean energy transition and associated component projects have been designed to provide a financially sustainable economic development model that can be expanded upon over the 20-year life of the solar project. Specifically, the revenues from the solar project would be used to fund the infrastructure-related activities that are not necessarily associated with immediate revenues, but have significant economic development potential. As an example, the new substation and 21 kV line provide considerable capacity for new electric customers to site facilities along Highway 264, but don't inherently provide immediate revenue to the Tribe. Therefore, the revenues from the solar project will be used to operate and maintain the substation and distribution line as Hopi attracts new customers to this corridor.

Strong coalition governance a Tribal commitment support the organizational sustainability.

In addition to the financial sustainability of the project, the sustainability of the coalition and partners involved in the project is well-structured. Tribal Council has reviewed the initiative and has fully endorsed HUC as the leading entity to guide project activities throughout the 5-year initiative. Additionally, all Tribal departments that play supporting roles in the project have been activated and are committed to achieving the project outcomes. This includes:

- **Hopi Telecommunications Inc. (HTI)** – HTI's mission is to provide quality telecommunications services and to implement an internal work culture that supports and encourages cultural awareness. Similar to HUC, HTI is a wholly-owned business of the Hopi Tribe, chartered as a Hopi corporation under Hopi Tribal Ordinance 45 and would play a lead role ensuring the Tribe integrates energy-related infrastructure with communications infrastructure to support economic development.
- **Hopi Renewable Energy Office (HREO)** is a Tribal office established to pursue long-range planning for renewable energy projects. HREO is currently engaged in negotiations for a nontribally owned solar project and would leverage this work for the proposed large solar project.
- **Hopi Community Planning, Economic Development, and Land Information Systems (HCPEDLIS)**. HCPEDLIS manages the development and execution of Hopi's CEDS. As a partner, the Tribal department would ensure plans and component projects align with the CEDS.
- **Hopi Education** – Hopi's educational department would be involved in coordinating the workforce development activities with Tribal schools to provide an inflow of motivated Tribal Members to the program. The goal is to excite students on Reservation about STEM-related jobs on Reservation and provide a pipeline for the Tribal solar workforce program.
- **Department of Natural Resources**. This department was heavily involved in the siting of the solar project based on its deep understanding of the Tribe's natural resources and farmers &

ranchers. The department engaged Tribal Members with grazing rights at the solar project site and was instrumental in modifying the site based on the feedback from Tribal Members.

Engaging Specific Organizations

Tribal leadership – Tribal Council will be engaged throughout the initiative to ensure that the component projects holistically address the needs of the Tribe. Starting with the creation of the Tribe’s clean energy transition concept, Tribal Council plays an oversight role to ensure the investments are aligned with Hopi’s sovereignty, history, and values.

Local Tribal governments – Component project #5 has been customized to ensure the Tribe’s 12 villages have an active voice in how the new infrastructure ultimately unlocks the economic development value specific to each village. No two villages are alike. Active engagement with each village ensures long-term sustainability and customized solutions that align the new infrastructure with the unique needs of each village.

Tribal businesses and members – developing new renewable projects and building new infrastructure involves dedicating land and resources for a specific economic development purpose. Without the buy-in from Tribal businesses and members, projects often face resistance. The Hopi coalition has made significant progress communicating and educating the Tribal members and businesses on Reservation that are the target beneficiaries of the projects. The Phase 2 BBBRC concept has been modified based on initial feedback and these stakeholders would be continually engaged throughout the project. Specifically, the ASU-led village engagement planned as part of Component Project 5 targets feedback from the Tribal businesses and members that would benefit from new, clean, reliable infrastructure to their respective geographies.

Labor and regional organizations – lastly, the coalition is targeting creating jobs for Tribal Members that have been impacted by the coal closures and lack of economic development on Reservation. The coalition has engaged the IBEW Local 640 chapter and has received a letter of support. Relationships with the labor union will be prioritized for the long-term value of the workforce development program.

Plan for Engaging Equitably

Hopi’s clean energy transition inherently addresses equity. The population targeted and geographic footprint represent severely underserved Peoples and communities. Furthermore, the economic recovery and resiliency aspects of this project tie to coal closures and the disproportionate impact Hopi faced from the COVID pandemic:

- **98% of the population on Reservation identifies as American Indian.**
- **31% of the population on Reservation is below the poverty line, more than double the national average of 13.4% and almost double the Arizona average of 18%.**
- **Hopi is one of the most vulnerable communities in the US dealing with coal closures.**
- **Hopi was disproportionately impacted by the COVID pandemic.**

All project activities have been designed to directly benefit the population on Reservation (American Indian), the geographic footprint of the Reservation (an underserved community), and the impacts of coal closures and the COVID pandemic.

Expected Outcomes

The Hopi clean energy transition initiative is expected to result in tangible near-term outcomes, as well as additional future value that builds off the direct outcomes of the federal grant funded activities:

At least 40 MW of Hopi-owned solar with the capacity for up to 500 MW of solar expansion.

As illustrated in *Visual Overview* attachment, the solar project is the immediate economic opportunity for Hopi. The solar project design is divided into an initial stage of 40 MW that is directly tied to the request for federal funds. The solar project site and associated engineering and interconnection is designed for up to 500 MW total. Revenue associated with the 40 MW project is approximately \$2.2 million per year. If the Tribe secures the additional funding for an expanded solar project and co-located data center, the revenue tied to this investment could increase to up to approximately \$170 million per year.

Concrete opportunities for economic development, including a data center at the solar site.

The solar site gives Hopi the ability to offer low-cost clean energy to a co-located site. The average cost of electricity on Reservation is currently approximately \$120/MWh. The solar project is expected to provide electricity between \$25-\$35/MWh. Additionally, the new substation provides the potential co-located data center site with access to the regional electricity market. This combination of low cost solar and available purchasing capacity has proven to be a powerful combination to attract businesses to the site.

A new substation and distribution line to improve reliability and to support businesses. The new substation and distribution line offers additional value by improving reliability to the Highway 264 corridor. This corridor has historically faced reliability issues, which negatively impacts Tribal businesses and homes located on Reservation. Furthermore, there are facilities along the Highway 264 corridor that do not have access to electric power and would require additional capital to construct electrical infrastructure. The new substation and 21 kV distribution line provide a redundant feed such that if the existing 69 kV line that serves the Reservation were to face an outage, the new line would quickly repower the Reservation. It also provides an easier access point for homes without electric power to tap into a reliable feeder nearby.

A Tribal solar workforce development program with an initial goal of 24 Tribal trainees. The workforce development program is being developed by Native Renewables, a Tribally-led non-profit with Navajo and Hopi leadership. Native Renewables has the most experience with recruiting, training, and connecting Tribal Members to clean energy jobs in the region. Native Renewables understands the unique challenges with skills training on Navajo and Hopi land and has developed a realistic plan that is aligned with the schedule of the large solar project. The program is structured to provide an immediate opportunity for Tribal trainees to be employed on the solar project. It is also being structured to be expanded beyond the scope of the 5-year initiative.

A remote microgrid that powers off-grid infrastructure reliably with clean energy. There are sites on the Hopi Reservation that require infrastructure (electric, water, & communications) that are not along the Highway 264 corridor. In many cases, it is cost-prohibitive to build out new infrastructure that connects these sites to infrastructure along the Highway 264 corridor. Rather than a costly expansion of the Highway 264 corridor infrastructure, Hopi will construct an “off-grid” microgrid solution using solar and battery storage. This project will result in a 250 kW microgrid that serves a water pump. The combination of hardened infrastructure along the Highway 264 corridor

and developing the expertise to economically construct “off-grid” solar solutions enables the Hopi Tribe to build out infrastructure to serve its entire Reservation.

A Hopi Infrastructure Master Plan that reflects the input of all 12 villages. While the proposed initiated would provide transformational support for economic development on Reservation, there are additional opportunities to leverage the Stage 1 buildout for future value to the 12 villages that are located throughout the Reservation. The Infrastructure Master Plan will directly engage the 12 villages and define specific goals and actions that 1) align with the Hopi CEDS 2) leverage the new infrastructure and 3) address the specific economic development needs of each village.

An agrivoltaics pilot project with technical and financial support from UofA. The Hopi coalition will also explore agrivoltaics as a potential innovative solution to achieve agricultural benefits on land where solar is deployed on Reservation. Hopi has partnered with UofA to evaluate options and pilot a project at a remote microgrid site.

Work conducted in BBBRC Phase 1

The large solar project was advanced to remove project risks and uncertainties.

- **Several sites were explored and a final site was selected.** The ultimate site reflected input from Tribal leadership, the Department of Natural Resources, and direct feedback from the Tribal ranchers that have grazing rights on Hopi land. The site what selected to avoid cultural & environmental sites and to keep some grazing area for the ranchers on the solar site parcel.
- **Preliminary environmental work was completed.** Led by HUC and the Department of Natural Resources, the team advanced the solar project environmental activities to pave the way for NEPA approval.
- **A preliminary engineering report was completed** and the staged solar concept is reflected in the design documents and site layout drawings.
- **Cost estimates were developed** by a reputable third-party engineering firm. The cost estimates are the basis for the Phase 2 BBBRC budget and have been incorporated into the economic modeling.
- **Received positive feedback from APS regarding the interconnection.** The team continued discussions with APS regarding the interconnection to the 500 kV transmission line that is owned by APS and is adjacent to the solar project and data center site. As stated in APS’ letter of support, APS has reaffirmed the technical feasibility of siting up to 500 MW of load at the project site. This statement significantly reduces technical risk to the project and has supported the Tribe’s conversations with data center developers.

Discussions with data center developers confirmed private-sector interest in co-locating a facility and purchasing solar power from Hopi. With cost estimates and a preliminary interconnection analysis performed by APS, the team was able to advance conversations with data center developers interested in investing in a co-located data center that purchases power directly from the solar project and regional electric market via the substation. *The team documented preliminary terms for the investment in two LOIs from Compute North and VCV Digital.*

Discussions with funders confirmed funding options to leverage EDA funds for more solar. The team made considerable progress exploring options to leverage the EDA Phase 2 BBBRC funds for a larger solar project of up to 500 MW. Based on these conversations, the team sees a viable

funding path that leverages the BBBRC Phase 2 funds along with the Department of Energy Tribal Energy Loan Guarantee Program (TELGP) and a commercial lender to expand the solar project. The team met with the TELGP program representatives and received three letters of support from lenders who have been educated about Hopi's initiative and who have expressed interest in working with the Tribe to provide funding support for the solar project expansion.

Discussions with funders to expand and extend the workforce development program. The workforce development program is structured to capitalize on the immediate job opportunity of the solar project. Based on feedback from Native Renewables, the team is seeking funding to pay trainees a stipend during their training time to increase interest and recruit more trainees. This funding is being sought outside of the EDA BBBRC Phase 2 funds, since it is not an eligible cost. In addition to stipends for trainees, the team is seeking funding partners that would commit to ensuring the long-term sustainability and enhancement of the program. The team has engaged with NDN Collective, an Indigenous-led organization dedicated to building Indigenous power. NDN Collective has invited HUC to a grant funding round to provide stipends to trainees. NDN Collective is interested in exploring additional opportunities to leverage its philanthropic arm of the organization in support of Hopi's project.

Two new construction projects were added: 1) the substation and 21 kV line and 2) the remote microgrid. In an effort to ensure Tribal villages, members, and businesses see direct benefit from the BBBRC Phase 2 investments, two new construction projects were added. These were originally contemplated as planning projects when the Phase 1 application was submitted; however, due to the hard work of the coalition, they have transitioned to construction projects. The substation and distribution line will provide direct benefit to homes and benefits along Highway 264. The remote microgrid will provide off-grid clean energy to a water pump that supports the Tribe.

The plan for the workforce development program was thoroughly developed. Native Renewables developed a detailed plan to launch a workforce development program to provide education and skills to Tribal Members seeking well-paying clean energy careers. Activities to launch the program would be immediately initiated upon award to allow the up to 48 Tribal Members to be trained in time to be employed on the construction of the solar project.

University of Arizona and Arizona State University joined the team. Both institutions agreed to support Hopi's initiative in targeted ways. University of Arizona committed to supporting the evaluation of agrivoltaics. This effort is critical to unlocking the full potential of Hopi's vast solar resource. University of Arizona also provided an initial commitment to provide funding to help fund a pilot agrivoltaics project at one of the remote microgrid sites. Arizona State University committed to supporting the Infrastructure Master Planning effort with Hopi's 12 villages.

The economic modeling of the initiative was updated based on the above updates. A key benefit of the Hopi Phase 2 BBBRC concept is that the project's economics are well understood compared to other "moonshot" ideas. **On the cost side**, detailed cost estimates support the budget for the highest cost component projects (solar project and substation project). **On the revenue side**, market-based benchmarks and conversations with data center developers support the assumed purchase price per MWH in the economic model. **The revenue from the solar project is sufficient to cover the operating and maintenance costs of the non-revenue generating component projects.**