Joint Village Strategic Planning
MEETING NOTES
Tuesday, May 2, 2023
10 AM MST
Zoom Videoconference and Telephone

Attendees

MUA Direct Congressional Appropriation $1.5 Million Award
- A brief description of where the Congressionally Directed Spending allocation currently stands in the eyes of JVSP given to Luther Lee and Joe Russell of Senator Kelly’s office
- Joe Russell gave a report on where the $1.5 million is and what the next steps are
  - This money will be routed through the Hopi Tribe and EPA
  - The Tribe needs to formally apply for the funding
    - This is not a competitive application but rather a confirmation that the Tribe is the intended applicant
    - This application is now open and will remain open for the time needed for the Tribe to submit
  - There is flexibility in changing the scope of the project slightly, but the money is ultimately intended for water at Upper Moenkopi
- Andrew Gashwazra noted that he can update Carrie and indicated it would be good to sit down with her to figure out next steps
- Le Roy Shingoitewa asked who is the appropriate person to get this started
  - He indicated this is important to figure out as the project is already behind schedule
- Neil Yazzie asked for a formal letter indicating the status of this project so that the Tribe can have instructions on what to do next
  - Joe Russell forwarded an email that is shown in Attachment A
- It was discussed that it would be good for Brian Cole and Andrew Gashwazra to meet with others to move this process along
- Brian Cole asked Joe Russell who replaced Nick Matellia and Russell indicated this would be Paul Babbit

Potential Renewable Energy Grant Benefiting the Villages
- Andrew Gashwazra shared a potential grant opportunity by Jadin Tech, LLC (See Attachment B)
  - This is a clean energy option
  - They are looking for a partner with either UMV, VML, or YPC
    - Cedric Kuwaninvaya indicated that YPC is interested
Hi Dorma,

I wanted to follow-up on my note previous email to confirm that President Biden signed the Fiscal Year 2023 spending bill into law last Thursday, which includes the funding for Hopi Water Transmission Line.

This is exciting news – and I wanted to let you know what comes next!

While this funding is specifically designated for your project, the distribution of the funding will have to follow federal grantmaking rules. Now that the funding has been signed into law, each federal agency will be responsible for developing a process to allow Congressionally Directed Spending recipients to “apply” for their funding. After the application is completed and approved by the agency, processing of the funding will begin – and funds will be disbursed just like any other federal grant.

The agency has your name and email as contact information, so they will reach out to you directly with the latest information. If you’d like someone else to be listed as the contact, please let me know and we can update the agency.

Our office has spent a significant amount of time over the past year helping recipients of funding from previous years navigate the process of receiving their Congressionally Directed Spending awards. Based on that experience, I've included some information below on the process which has historically been used by Environmental Protection Agency to distribute Congressionally Directed Spending funding through the Drinking Water State Revolving Fund. Please note that some of this information is based on a process and timeline from previous years, but we wanted to share as much information as possible to help you prepare to receive your funding award.

I know this can be a lot of information, and we are here to help every step of the way with the process. If you have questions off the bat, please let me know and I’d be happy to hop on the phone to discuss more. We’re very excited that this funding is finally becoming available and look forward to working together to see the project to completion!

---------------

Environmental Protection Agency:
Overview: The Environmental Protection Agency will manage all water infrastructure Congressionally Directed Spending awards out of their regional offices. All Arizona projects will be managed by EPA’s Region 9 office.

For last year’s CDS awards, EPA developed implementation guidance which explains (in some significant detail) the process that CDS recipients will go through in order to receive funding. While this guidance has not yet been updated for this year’s CDS awards, we recommend reviewing the guidance as it is likely most of the process and requirements will remain unchanged. The guidance can be found HERE.

EPA has also put together a dedicated website with information on the Congressionally Directed Spending Process – including several webinars and online training courses for CDS recipients which can be found HERE. Again, these resources are for last year’s funding awards but will be helpful in preparing for next steps.

Representatives from EPA Headquarters and EPA Region 9 will reach out to you directly to host additional webinars to discuss the process for this year’s

Estimated Timeline: EPA will develop updated implementation guidance and training materials for CDS recipients in the next 4-6 weeks and will then reach out directly to you. After this guidance is finalized, EPA will open a Notice of Funding Opportunity (NOFO) where recipients can formally “apply” to receive their CDS funding – applicants can apply on a rolling basis and EPA staff can help throughout the application process. The length of time that it will take EPA to review the project will vary significantly based on the project’s complexity - but for most projects, funding awards can be finalized in 2-3 months.

Agency Point of Contact: The point of contact for your CDS project at EPA Region 9 is Jillian Bletz, who can be reached at bletz.jillian@epa.gov or (415) 972-3838.

--------------

Joe Russell | Legislative Assistant
Office of Senator Mark Kelly
202-224-2235
Kelly.Senate.gov
Self-Sustaining, Independent, Clean Power Solutions

Hydrogen storage is a key enabling technology for the advancement of hydrogen and fuel cell technologies in applications including stationary power, portable power, and transportation.

MARCH 2023

JADIN TECH, LLC

Jadin Tech, LLC is an SBA 8(a) certified company which is wholly owned by Akhiok-Kaguyak, Inc., an Alaska Native Corporation. Our management staff has over 100 years of combined experience in providing leading-edge technology solutions to the Department of Defense (DoD) and Federal Government Agencies.

- ANC SBA 8(a) Certified
- Proven experience with Exceptional CPARS
- $700M+ in projects completed to date
- Full compliance with NIST SP 800-171
- Unwavering commitment to quality

SBA 8(a) Certified

ANC 8(a)s can receive DOD Direct Awards up to $100M without a J&A (FY2020 NDAA Section 823)

ANC Direct Awards cannot be protested (13CFR124.517(a))

ANCs can negotiate directly with the Government through 8(a) Sole Source contracting (13CFR124.503(c)(2))

Simplified contracting using the SBA 8(a) Program
Harnyss is strategically focused on the production of mobile, space-constrained emergency backup power systems and are advancing into the EV, light construction and material handling applications.

Harnyss is the leader in state-of-the-art hydrogen storage technologies, focusing exclusively on clean energy storage and use. Harnyss leverages its technologies to provide safe, economical, and clean energy storage and independent power generation systems.

**Benefits**
- Quick and easy installation
- Modular and scalable
- Affordable levelized cost of electricity
- Low O&M cost
- Reliable
- 20-year performance guarantee

**Clean Power Generation**

**ON-GRID AND OFF-GRID PRIMARY & BACKUP POWER**

Jadin Tech offers a state of the art, renewable energy power solution that combines HARNYSS' compact, low pressure hydrogen storage technology, onboard hydrogen production, fuel cells and supercapacitors for energy storage with a performance lifespan greater than 20 years.

The autonomous, renewable source of power eliminates the need for diesel generators and the logistics and supply chain related to fuel delivery and wear and tear parts replacement.

**Energy Independence for:**
- Rural and Remote Communities
- Military Applications
- Global Partners
- Grid Stability
- Critical Infrastructure
- Emergency Response

**No Grid. No Problem.**
Environmental Impact

Hydrogen technologies reduce environmental impact by increasing efficiencies across the energy value chain.

**Electrification**

- Hydrogen Fuel Cell vs. Diesel Generator

- For every kWh, a diesel generator emits about .7 lbs. of CO2eq.
- Hydrogen fuel cells emit only water.
- The average US household uses over 866 kWh per month.
- Replacing a generator with a fuel cell could therefore save a single US household over 3.6 tons of carbon emissions annually.

**Storage**

- Harnyss Solid State Storage vs. Lithium-Ion Battery

- 55% of lithium-ion’s carbon emissions originate from mining rare earth metals, like cobalt.
- 90% of rare earth metals are refined in China (IEA).
- Harnyss’ storage packs twice the energy density of lithium-ion batteries while using easier-to-source materials.
- Compared to lithium-ion, these materials reduce up/downstream environmental impacts, such as land use change, water usage, and toxicity by orders of magnitude.

Self-Sustaining, Independent & Clean

- Safe
- Economical
- Scalable
- Renewable

**Harnyss**

- Patented solid-state low-pressure Hydrogen storage

- Fuel cell generator as backup for solar

- Electrolyzer

- Solar panels provide electricity for electrolysis and power generation

Supercapacitors for energy storage
Benefits

Solid-State Hydrogen Storage

The Safe, Scalable, Cost-Effective Hydrogen Storage Method

SAFE & EASY TO HANDLE
Hydrogen Stored at less than 250psi
Non-Pyrophoric Material

COST EFFECTIVE
High Energy Density
Long Life Cycle / 100% Recyclable

SCALABLE ENERGY STORAGE
High energy storage capacity
3-5x Compressed Hydrogen

Energy Management System

Centauri View is a management software that manages the Oasis, monitoring its state to the cell level, calculating and graphing data, reporting that data, controlling its environment, authenticating it and balancing it.

Features
- Instantaneous PV Power Generation
- Daily PV Usage
- Daily Energy Consumption
- Total Generated Energy
- Battery Bank/Module Information (Voltage, Current, Temperature, Status & more)
- Graph visualization of all the measurements
- Log records of measurements which can be viewed or extracted as a .csv file
- Important Alarms of incidents (e.g. PV down, battery low charge, fan is off etc.)
- Ability to combine multiple power sources to provide consistent power
Distributed Energy Resources

100 kW – 5 MW+

Self-contained, autonomous operation:
- A continuous solar + storage power supply
- Clean, Zero-Carbon energy
- Atmospheric water production on site
- Safe on-site hydrogen production
- Consistent long-term pricing at low cost per kWh
- 24/7 monitoring of performance, with continuous analysis of operating data

HARNYSS SELF-CONTAINED MODULAR SOLUTION

Harnyss Oasis
Levelized Cost of Electricity
LCOE ~ $0.08-$0.20

TRADITIONAL PV TO END USER

Carbon Offset Credits
Measurement units used to compensate an organization for investing in clean energy projects that eliminate emissions

Levelized Cost of Electricity (LCOE)
Assuming a 25-Year Operating Life of a Harnyss Oasis solution, a typical 1 MW primary power solution would cost between $0.08 to $0.20 / kWh
Oasis Off-Grid EV Charging

Off-grid Level 3 EV Charging is not a thing of the future. It's happening now.

- 0-80% charge in up to 10 minutes
- CHAdeMO and CCS compliant
- Available with single or dual outlet
- Output voltage up to 920V with liquid cooled cable
- Highly reliable and efficient with power factor 0.98
- RFID user authentication
- 15.6" customizable TFT color screen
- Contactless bank card payment
- IP54 & IK10 compliant protection
- OCPP 1.6 compliant
- In-built communications (3G; LAN; Wi-Fi) Available with custom branding options

Overall Benefits

- Initial investment vs ROI
- Marginal land use
- Ability to meet demand at the most critical peak hours
- Ability to export power to neighboring states
- Take advantage of existing Solar Arrays that lacks maximized energy storage
- Reduce overall carbon footprint
- Reduce and eventually eliminate requirement for lithium batteries
- Avoid future government regulations on carbon emissions
- Reduce the requirement for hydrocarbons
- Bottom line: Levelized Cost of Energy (LCOE)