[redacted]

ACHIEVING ENERGY SECURITY, MOBILITY, AND REDCUING MAINTENANCE COSTS WITHOUT CAPITAL APPROPRIATIONS

UTILIZING ENERGY-AS-A-SERVICE APPROACH THROUGH ALASKAN NATIVE CORPORATION 8(A) AS A PHYSICAL/FINANCIAL HEDGE FOR ENERGY COSTS AND ENERGY SECURITY

TRADEOFFS IN UTILIZING SERVICE-BASED MODELS TO ACHIEVE MISSION AND TASK INFRASTRUCTURE UPGRADES

[redacted]

Abstract: *This white paper presents the approach, risks, and benefits related to addressing mission critical infrastructure upgrades without the use of Federal Government appropriations towards achieving Energy Security through utilization of term-based service-based models that result in operational costs equal to current expenses without the need for capital, under DOD's Alaskan Native Corporation 8(a) regulations.*

I. INTRODUCTION

Infrastructure planning has become a central concern to the Navy and to a greater extent to the Dept of Defense (Government) in pursuit of readiness of mission. Over the past several decades government-level policymakers have weighed in and afforded many contractual processes to assist the Government attain new infrastructure through shared energy savings projects (DOE Super ESPC, UESC's). Under those contractual processes the government may utilize the future stream of cost savings to pay for the investment and operations and maintenance over a term not to exceed 25 years (DFAR 242).

Service-based models whereby the Government leverages commercial businesses to design, build and operate/maintain energy-related infrastructure enables the Government to achieve new infrastructure without the first cost of capital and eliminates the long-term costs and risks of operating the system(s).

For this "White Paper", Energy Security through Service-based models, in this context, is providing prime energy delivery to supply the critical mission of the entire shipyard during normal operations without the need for appropriations.

The purpose of this White Paper is to provide a legal analysis of entering into a fee for a service at the shipyard(s) [redacted] that addresses a shipyard-wide energy system that decentralizes the existing antiquated and capital-intensive compressed air systems with new, highly efficient, cyber-secure and redundant compressed air systems dedicated to the use of the shipyards and their mission without the use of capital. The statutory authority for a service-based model, federal acquisition regulations that support service-based model, directed award ability, maximum sole source contract value, and ownership structures that are possible are addressed in this White Paper. We start, however, with a basic introduction to compressed air systems.

Compressed-Air-As-A-Service will utilize energy conservation measures as a bridge to execute Energy Security for the shipyard without capital appropriations.

II. COMPRESSED AIR SYSTEMS

Compressed air systems serve a dynamic purpose at shipyards. They provide a source of energy for ships while docked as well as provide an ignition-free source of energy for the purposes of manufacturing energetics and propulsion equipment. Additionally, the compressed air is also used for HVAC controls and machine tools.

Compressed air systems contain the compressor, an air cooler, an air receiver tank, filters, dryers and condensate trap(s) and a distribution system.

As an example of a compressed air plant design we have incorporated the design for new compressed air systems recently implemented at [redacted].

III. NNSY CURRENT ASSETS

[redacted] has [redacted] large centralized compressed air plants (housing a total of 8 large compressors) producing "medical quality[1]" air located [redacted] and utilize distribution piping with diameters ranging from 24-inch down to 1-inch with a total estimated linear foot of distribution of 6 miles. The compressed air plants and their distribution systems are mostly original (circa 1950) with incidences of increased expenses annually, which address deferred maintenance and failing infrastructure (see image of plant). The compressed air generator operates based on a demand requirement, meaning when air pressure is needed the compressed air plants operate. As demand increases the generators create more air. This approach to meeting the requirement for air demand works, in most cases, however when the distribution system is compromised and in need of constant patching or replacement the generators inherently operate at heightened output in order to meet the demand while blowing air out of failed distribution lines; recently a 6" line failed and was not fixed for 3 months. As more air is pushed through and out of the system through holes in the distribution and leaky valves, the system requires increased energy for a long period of time, potentially using limited supply of electricity (energy efficiency projects are done for a myriad of reasons, which include increasing the available amount of electricity related to serving mission without increase the investment in the Utility infrastructure).

IV. SERVICE-BASED MODEL (Air-As-A-Service)

The service-based model leverages the purchase of compressed air as a utility much as electricity, natural gas or water is purchased. With an air-as-a-service/ utility program, the service provider determines the appropriate equipment then purchases, installs, operates and maintains the equipment on site. They also operate and maintain the system, delivering guaranteed high-quality compressed air to the facility at a pre-established cost and energy efficiency. The following discussion highlights the advantages of considering purchasing compressed air than the equipment to make it.

By moving to a Air-As-A-Service Utility model the [redacted] would:

- Shift 100% first cost of building a modern system to private industry
- Shift 100% of the operational and maintenance costs to private industry
- Shift 100% of the obligation to serve to private industry
- Design and construction of air systems that are modular for ease of process improvements
- Shift production problems and cost of lost production associated with unscheduled downtime of the system
- Shift product quality and/or production problems associated with inadequate flow or pressure
- Shift unbudgeted expenses associated with repair or replacement of components in the system
- Shift cost of capital associated with replacing aging or failed equipment
- Shift internal labor cost for maintaining the system
- Shift the cost of rental compressor(s) that may be required when a compressor is out of service

The service-based model would replace the existing air generation systems with new, highly efficient modular generation system(s) with equipment located as close to the mission/task as possible using as much of the existing distribution system as possible. The generators would be electronically monitored through AWS cloud systems (or as acceptable to the [redacted] requirements) to ensure consistent temperatures and flow rates. Each generator would have a utility grade meter to measure and affirm the units of compressed air being sent to each mission. This meter reading by

[1] Oil less air generation/ supply

mission/location of air usage will provide [redacted] with the ability to direct bill the tenant mission for actual usage.

Air-As-A-Service leverages commercial ownership benefits to reduce service costs to the [redacted] in the following ways;

- Service provider can claim the tax benefits of asset ownership through its UCC filings,
- Service provider can depreciate the asset in accordance with GAAP rules,
- Service provider can invest in new technologies and controls at any time to improve the efficiency of the system

As an example: Under the Trump Administration the tax law related to assets owned by a commercial entity may depreciate the cost of this type of asset at 100% in the year it begins its commercial operation. This single benefit yields price competitiveness that the Navy is unable to leverage.

Under IRS rules Air-As-A-Service is not considered a capital lease as long as the term of the service [redacted]. The useful life of a compressed air plant is nominally 30 years, thus limiting the potential length of the contract to 24 years, which fits nicely under FAR241.103-2(b) limit of 25 years.

V. LEGAL FRAMEWORK

A service-based model would operate within a simplified contract structure where the Government would agree to purchase a maximum amount of compressed air units (defined as [redacted]) at a fixed rate for a fixed number of years, with [redacted] contract defined as a Contract Line Item Number (CLIN). This way the government knows exactly what the maximum cost for air required by it or a tenant mission will cost without the concern for annual appropriations to "repair" issues, as repairs would be the sole responsibility of the Air-As-A-Service provider.

FAR 241.103 established the Statutory and delegated authority to; (1) The contracting officer may enter into a utility service contract related to the conveyance of a utility system for a period not to exceed 50 years (10 U.S.C. 2688(d) (2)). Using this FAR clause the [redacted] can extend use of the existing compressed air infrastructure to the Air-As-A-Service provider.

FAR 241.103 further establishes the Statutory and delegated authority to; (2) The contracting officer may enter into an energy savings contract under 10 U.S.C. 2913 for a period not to exceed 25 years.

Defense Federal Acquisition Regulation (DFAR) 241.103 authorizes the [redacted] to enter into "Utility like" agreements for nonregulated utility services, which is the contemplated contract action for delivery of air services.

Under the Air-As-A-Service arrangement the government would retain the right, at the end of the term of service, to cancel the service and have the service provider remove the equipment, renegotiate the terms of service or purchase the equipment.

The [redacted] can act on this proposed Air-As-A-Service by utilizing the [redacted] as established by the Office of the Secretary of Defense (OSD) which offers a unique collaborative and streamlined approach that has dramatically impacted operations for other federal entities utilizing this approach according to tracked metrics, shown in Figure 1.

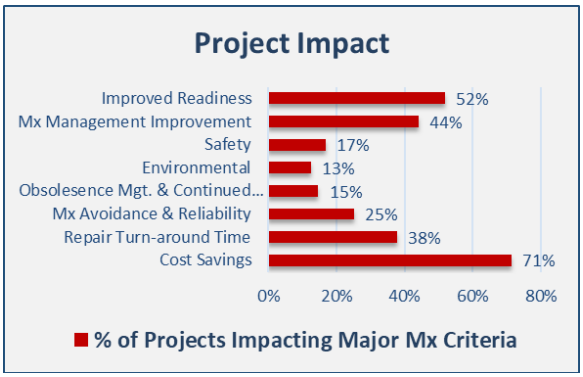

Figure 1 - Greg Kilchenstein, OSD

Under the [redacted] process the proposed activity must meet the following project requirements to qualify:

- Cannot be used for asset acquisition
- RDT&E (2-5 years POP) and O&M (1-year POP) oriented projects accepted
- Focus on public good first, DoD second
- Satisfies a maintenance and sustainment need
- Industry cost share required
- Multiple project partners (industry, academia, Services) preferred

The proposal Air-As-A-Service meets all the aforementioned [redacted] requirements. Additionally, the use of the [redacted] process fast tracks the development of the activity, shown in Figure 2 below;

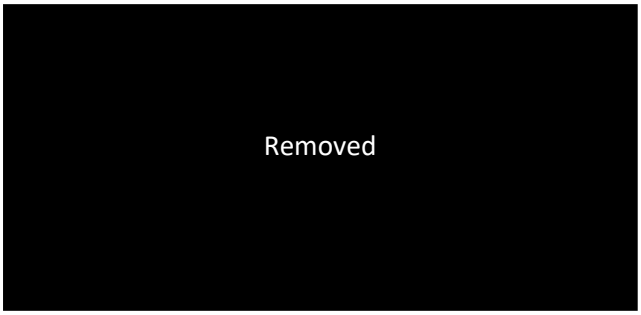

Figure 2 - Greg Kilchenstein, OSD

The Air-As-A-Service would exclude use of any existing government generation and control equipment, and would be replaced with new modular compressed air supply generation and control systems, which can be housed on [redacted] land without the requirement of an easement or lease, by simply allowing the utility service provider a "laydown" area for equipment during the period of performance. Additionally, the existing compressed air plant buildings would be decommissioned and repurposed, potentially providing the [redacted] with much-needed square footage.

Key advantages to working with an Alaskan Native Corporation 8(a) for Air-As-A-Service Authority:

- Significantly accelerated procurement timeline without the disruptions and delays resulting from complex evaluations and resulting protests
- Flexibility and Reliability – through direct negotiations per 13 CFR 124.503, competitive threshold exemptions per 48 CFR 19.805-1
- 8(a) Sole Source Awards Cannot Be Protested – 13 C.F.R. 124.517(a): ANC 8(a) companies eligible for a sole source or competitive 8(a) requirement may not be challenged by another Participant or any other party, either to SBA or any administrative forum as part of a bid or other contract protest.
- Unlimited Sole Source Ceiling – ANC's, unlike other 8(a) companies – provide the Government with a virtually unlimited sole source ceiling per 48 CFR 6.303-1.
- Small Business Subcontracting – FAR 19.703 (c): Subcontracts awarded to an ANC/Indian tribes are counted towards subcontracting goals for small business regardless of size or SBA certification status.
- Sole source ceiling without the need for J&A (DOD only) – Office of the Under Secretary of Defense (DARS tracking number 2020-O0009) directing contract officers to use $100,000,000 in lieu of the $22,000,000 threshold at Federal Acquisition Regulation (FAR) 6.302-5(b)(4), 6.303-1(d), and 19.808-1(a). This class deviation implements Section 823 of the National Defense Authorization Act for fiscal year 2020 (Pub. L. 116-92)
- Contract amount and annual spend attributes directly to the [redacted] ANC 8(a) SBA goals.