

Roadmap to Implementing Climate and Resilience Goals: Federal Agency Solutions

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One of the first actions of the Biden Administration, Executive Order 1408¹ introduced bold and comprehensive policies to address the threat of global climate change. Among other provisions, the order established that the Federal government will:

“Lead the Nation’s effort to combat the climate crisis by example — specifically, by aligning the management of Federal procurement and real property, public lands and waters, and financial programs to support robust climate action.”

The Biden Administration also introduced, the American Jobs Plan, highlighting the need to jumpstart clean energy manufacturing through federal procurement. The President’s proposal includes \$46 billion in federal purchasing and highlights that federal purchasing power can be used to establish clean energy production by supporting innovation while also creating and maintaining jobs.

Federal procurement can be a powerful initiative to drive, among other activities, greater adoption of carbon-free energy sources by federal agencies. As the largest power purchaser in the country, the federal government affects the types and cost of power available for the entire United States, and can potentially increase the market for carbon-free electricity. However, the Administration needs better tools and processes to implement its climate change initiatives. While the purchasing authorities and tools available to federal agencies provide an immediate pathway to clean power

purchases, strategic improvements could accelerate federal adoption of carbon-free energy.

The federal government’s role in renewable energy purchasing began more than 15 years ago with purchases of renewable power by military and civilian agencies. Agencies achieved significant progress by entering into long-term renewable power purchase agreements (PPAs) by purchasing renewable energy credits (RECs)—after navigating a complex web of procurement, legal and budgeting challenges.

However, these efforts did not fully leverage the authority of the federal government. Agencies were required to implement the power purchasing program regardless of their level of knowledge, tools, interest and resources. Most projects were executed on a stand-alone basis, and agencies and private developers often had to spend years overcoming legal and financial challenges on each transaction.

The Biden Administration plan will require bold action. Without clear leadership, direction and guidance at each agency, federal agencies will not be able to, and will not be incented to, invest in carbon-free electricity at the magnitude needed. The progress to date is significant given the challenges involved, but the number of projects and their associated impact are paltry compared to targets that the federal government seeks to, and reasonably could, achieve.

Clean energy projects move forward best when backed by a coordinated federal agency effort. Agencies may be able to obtain questions about their legal authority, project economics and the practical steps required to advance from vision through procurement to actual execution of an agreement. To create meaningful progress toward climate-related goals, however, agencies will need to accelerate and streamline the PPA process.

¹ [Executive Order 14008](#) of January 27, 2021. See Part II.

Making the process more straightforward, transparent and predictable will increase competition among private sector energy providers to serve federal agencies and help improve the price competitiveness of carbon-free electricity supplies.

The following are recommendations to make it easier and more cost-effective for federal agencies to purchase carbon-free electricity supplies.

Remove Impediments to Longer-Term Agreements:

As discussed below, there are a variety of legal authorities employed by agencies to implement carbon free electricity projects. However, each authority has specific requirements and criteria that may or may not be applicable in a given situation. These authorities require updating to address present day needs, including allowing for long-term agreements, enabling the use of virtual PPA's and making these tools available to all agencies.

Empower Agencies Through Executive Orders: The Biden Administration could issue interpretative guidance to clarify how legal authorities and the federal power marketing agencies can be utilized by federal agencies, how PPAs can address legitimate requirements of project financiers and how PPAs should be treated for budget scoring purposes.

Focus Accountability at the Agency Level: The responsibility for achieving carbon free electricity targets needs to be assigned to agency offices that purchase utility services and manage real estate. This is best accomplished at the portfolio level, providing the agency with the ability to take advantage of regional differences in carbon free electricity markets.

Recommended improvements to legal authority

- Empower GSA and DOE to authorize agreements for up to 40 years
- Enable current authorities to execute virtual PPAs
- Enable all Federal agencies to authorize PPAs

Empower Agencies Through Executive Order

- Clarify legal authorities and the use of federal power marketing agencies
- Address needs of financial community
- Develop appropriate budget scoring

Recommendations for Federal agency leaders

- Prioritize carbon-free energy
- Create accountability measures for meeting carbon-free energy goals
- Acknowledge that carbon-free energy may cost more than fossil fuels in the short run
- Utilize Agency offices that actually purchase the power and manage the real estate to implement the programs.
- Accelerate currently planned projects
- Create teams and develop expertise to implement carbon-free energy projects
- Accelerate ESPC/UESC use



Power Purchase Agreements as a Tool

PPAs have long been the primary method of spurring the siting and development of renewable power projects, whether on or off federal property. Making a contractual commitment to purchasing power reduces the power producer's business risks and helps create a feasible project. However, federal agencies are often limited to 10-year contracts that do not support the longer-term view required for clean energy procurement.

In theory, PPAs are attractive from a federal policy perspective for several reasons. First, power is essential to the day-to-day operations of federal facilities, which means that power purchases will be funded regardless of the source of supply. Second, purchases under a PPA align the federal government's energy expenditures with federal policy objectives under a near budget-neutral profile.

In practice, PPAs have been difficult to implement. The lack of legal authority to enter into long-term contracts, along with federal budget scoring rules, have made PPAs an elusive option for advancing policy objectives for some federal agencies. Several federal agencies have expressed interest in purchasing electric power produced by solar, wind, hydropower, nuclear and carbon-free sources. However, myriad complex regulations and processes make it very challenging to implement PPAs on a broad scale to support a policy outcome.

Developing carbon-free energy sources requires financing terms of 15 to 25 years or more, and first-of-a-kind projects may require 40+-year financings.² Accordingly, the project developer (the borrower) and any lenders will want to know that a high-volume purchaser(s) will buy the generated power for the duration of the loan term. Because long-term financing is essential, utility companies and carbon-free power providers are exploring how to enter into contracts with terms longer than 10 years with federal agencies and other large power purchasers.

Generally, federal agencies can enter into PPAs to obtain power from a carbon-free electricity source under the General Services Administration's (GSA) authority set forth in 40 U.S.C. § 501, subject to applicable federal and state requirements relating to the provision of electricity. Most federal power is purchased through this GSA authority, but contracts are limited to a maximum of 10 years. Given the high up-front costs associated with the development of carbon-free electricity sources, a longer-term PPA would more broadly facilitate financing these sources. Civilian and military agencies alike need longer-term authority.³



Prioritize Federal Agency Energy Purchases

Power purchase decisions are complicated, yet also important for adopting alternative energy sources. When evaluating whether to purchase power from a carbon-free electricity source, a federal agency purchaser will need to consider its demand profile; understand performance risks of its power source and whether it will be reliable; and analyze the financial impact. Likewise, investors who help finance carbon-free power installations evaluate not only elements common to all power projects, including technology stability, contract term and tax advantages, but also regulatory approvals, safety, reliability and other concerns raised by novel technologies.

Historically, carbon-free electricity purchase decisions by federal agencies have reflected a mixture of budgetary considerations and policy directives. The result is a patchwork approach within agencies and budget-scoring rules that inhibit innovation. As agencies move to implement climate change initiatives, a portfolio approach would be more effective. This approach should consider the agency's:

- **Baseline power demand requirements**
- **Current cost of power and backup generation**
- **Carbon-free electricity goals**
- **Energy resilience requirements**
- **Performance metrics**
- **Tools and techniques to be employed**

In all likelihood, a long-term commitment to purchase carbon-free electricity will be an important component of a federal agency's portfolio of climate-change initiatives. As discussed above, this commitment can take many forms and will vary based on the project location, the purchasing authority, and the risk tolerance and financial objectives of the federal agency. Many of these considerations are unique to federal agencies, while others apply to any option available in the power supply markets or from the local utility that supplies power to the federal agency.

² For example, a solar power project may require a 20 year term; a biofuel facility a 30- to 35 year term; and a micro-reactor or small modular reactor a 40+ year financing term.

³ Federal agencies located within the service territory of certain power marketing administrations (PMAs) have augmented purchase authority. Within the Western Area Power Administration (WAPA) footprint, agencies can purchase power for up to 40 years under certain circumstances. Certain Department of Defense (DOD) regulations (such as 10 U.S.C. § 2922a) permit purchase agreements for up to 30 years under certain circumstances. Energy Savings Performance Contracts (ESPCs) permit 25-year agreements for power production facilities if the agreement will produce energy savings (see also Utility Energy Service Contracts (UESCs) below).

The Three Common PPA Structures

As federal agencies consider their opportunities to secure carbon-free electricity, they will need to determine which type of PPA will best address their needs. In some instances, an agency can purchase carbon-free power directly from a producer; in others, the agency is better served by incentivizing its utility provider to invest in carbon-free power sources. The following are the three common forms of PPAs.

On-Site PPA

If the agency has property suitable for a solar power installation or another kind of carbon-free power generation, the agency may consider an on-site PPA. This PPA creates a long-term easement or lease that allows the energy developer to design, build, operate and maintain a carbon-free electricity source on the property. Energy will be consumed “behind the meter,” thereby reducing the metered consumption from the local utility’s perspective. Where applicable, an on-site PPA conveys the project’s renewable energy certificates (RECs) to the purchaser, allowing the federal agency to claim credit for the carbon-free electricity added to the grid.

On-site PPAs require the development of an asset designed to serve one customer—in this case, a federal agency location. Therefore, the PPA revenue stream must be sufficient to pay for the construction, financing and operating cost of the installation. Additionally, because the on-site PPA affects the utility load pattern of the purchaser, careful analysis is required to determine the impact of the project on the purchaser’s utility bill. For example, if the utility bill includes demand charges, an agency could reduce peak charges with on-site energy production.

An agency also can integrate resilience goals into an on-site PPA contract. For example, the PPA may include the provision

of battery storage to support isolated, critical loads during a power outage. While this adds complexity to the arrangement, the ability to generate power on-site is a key component of a functioning microgrid.

On-site carbon-free power projects are typically enabled through the following:

- 10 U.S.C. § 2992a on DOD land – agreements up to 30 years (federal purchaser)
- ESPCs and UESCs – subject to certain rules and up to 25 years (federal purchaser)
- 10 U.S.C. § 2667 leases – typically provides for a 30-plus-year lease is typically a utility or third party, because of the Office of Management and Budget (OMB) scoring rules limits direct federal on-site purchasing except in certain circumstances)

Since power generated on-site is usually purchased by a single customer—in this case, a federal agency—a standard 10-year PPA is rarely a good fit. In some instances, a utility company might be willing to risk that the federal government customer will not renew the PPA in 10 years, or that it might not be able to sell power elsewhere.



Off-Site Physical PPA

Under an off-site physical PPA, the federal off-taker will purchase carbon-free electricity from a project located offsite. The off-site project transfers legal title to the power at a designated delivery point on the electric grid where the power is delivered to the purchaser. Physical PPAs for renewable power also convey the RECs generated by the project to the federal agency.

Under a physical PPA, the federal agency will incur charges related to the delivery of power and will also need allow for the delivery of conventional “brown” power around the production and delivery of carbon-free electricity. Some utilities have products that simplify this process. For example, in a “sleeved” physical PPA, a utility company transfers money and energy to and from a carbon-free energy project on behalf of the buyer. In exchange for a fee, the utility will “sleeve” energy directly from the project to the federal agency purchaser at the delivery point. As part of the service, the utility supplies additional conventional power to supplement the production and delivery of carbon-free electricity.

For federal agencies, off-site physical PPA's offer significant potential as the transaction is handled largely by the utility. However, the cost of such power will need to be recouped by the utility under a separate arrangement (i.e., not part of the base tariff).

Virtual PPA

A virtual PPA, also called a “contract for differences,” obligates the purchaser to pay for or receive the benefit of differences between the PPA price (the “strike price”) and the market price. Under this arrangement, the project developer sells the power into the grid and receives the market price at the time that the energy is sold, plus or minus the difference between the market price and the strike price. In essence, the virtual PPA provides the power purchaser financial hedge against swings in electricity prices. For example, a virtual PPA would protect against the rapid price hikes experienced by Texas utility customers during the 2021 severe freeze.

To further mitigate the risks related to market price movement, risk mitigation products such as settled guarantee agreements provide mechanisms.

The strike price established under the virtual PPA reflects the cost of developing and financing the carbon-free energy project, and increases the amount of carbon-free electricity on the electric grid. As a result, the buyer receives the project's RECs for the additional carbon-free energy associated with the project.

Another attractive feature of a virtual PPA is that the purchaser continues to pay its utility bill as before, because the contract is purely financial. Notably, virtual PPAs are available only in



competitive wholesale markets where carbon-free projects can directly sell power into the grid, including the California Independent System Operator (CASIO) and the PJM Energy Market.

For federal off-takers, virtual PPAs offer several benefits that potentially could deliver on the Biden Administration's “whole of government approach:”

- **Site-agnosticism:** Private energy developers assume responsibility for acquiring a site, obtaining permits and otherwise developing a project that delivers interconnection and wholesale market access. The federal agency buyer does not need to be involved—as long as the project is built on time and can deliver power to the grid. By contrast, an on-site PPA involves a long series of steps to make the land parcel contractually available for the duration of the project's useful life.
- **Minimal load profile impacts:** Virtual PPAs do not impact a federal agency's load profile as no power is actually delivered, allowing the agency to avoid the considerable burden of ensuring delivery of the federal agency's conventional power supply.
- **Manageable budget scoring:** The OMB has budget scoring rules that front load the cost of a PPA to the federal agency unless specific contract authorities are utilized. Navigating these rules in a way that allows for repayment to private financing sources is a challenge and discourages investment. For a virtual PPA, the current rules should only score the expected value of differences over the contract term expressed in today's dollars—allowing for far more reasonable budget scoring and broader application across federal agencies.

Absent new legislation, federal PPAs will continue to be created under legal authorities which are often specific to a particular federal agency. In addition, interpretations will vary both within and across agencies, limiting the benefits of precedent and adding to the cost and timeline of project development.

Key federal utility acquisition legal authorities

The federal government purchases over \$15 billion in utility services from over a thousand utility service providers.⁴ Federal agencies can purchase carbon-free electricity through a range of legal authorities.⁵ However, procuring carbon-free electricity has become a significant challenge. Several factors, including legal authority, cost and process, have impacted federal agencies' ability to make decisions and execute contracts that are critical to the success of carbon-free electricity purchasing. Under current regulations, contracts cannot be negotiated in weeks or even months. The process is complex and, to date, has been navigated largely by agencies on a "one off" basis (except for GSA areawide purchasing that is limited to 10 years).

Ultimately, federal agencies need authorities that can be implemented quickly and efficiently and that permit at least 20- to 40-year purchase agreements, depending on the size and type of facility that is delivering the power to the government.

Below is a summary of the current legal authorities:

GSA's Areawide Contracts and Separate Contracts

GSA is the lead agency for contracting for public utilities (electricity, natural gas, water, sewerage, thermal energy, chilled water, hot water and steam) on behalf of the federal government.⁶ GSA undertakes this responsibility in accordance with 40 U.S.C. § 501 and Federation Acquisition Regulation (FAR) Part 41.

Most federal agency power purchases are made through areawide or direct purchase contracts under the authority of the GSA. These contracts are authorized by 40 U.S.C. § 501 and carry terms of five to a maximum of 10 years. Areawide contracts authorize the purchase of specified quantities of electricity at a specified price or tariff for a specified period of time and specific negotiated or regulatory determined rates.

The authority is delegated to specific federal agencies (DOD and DOE),⁷ and GSA arranges for or delegates the authority to other federal agencies. Should a federal agency require a utility service contract for a period of more than one year, but not exceeding 10 years, it may submit a request for delegation of authority from GSA in accordance with FAR Part 41.103(c).⁸ When acting under delegated authority, a federal agency must act in accordance with, and subject to, GSA's authority. A federal agency is required to acquire services under any applicable areawide contract unless service is available from more than one supplier; or the head of the contracting activity or designee otherwise determines that use of the areawide contract is not advantageous to the government.⁹

Absent an areawide contract or interagency agreement, federal agencies are required to acquire utility services by separate contract subject to FAR Part 41 and the agency's contracting authority.¹⁰ A contract exceeding a one-year period, but not exceeding 10 years, may be justified and is usually required when any of the following conditions are met:

- The federal government will obtain lower rates, larger discounts or more favorable terms and conditions of service.
- The contract will reduce or eliminate a proposed connection charge, termination liability or any other facilities charge to be paid by the federal government.
- The utility service supplier refuses to render the desired service except under a contract exceeding a one-year period.¹¹

Contracts for carbon-free electricity purchases work only when the utility selling the power has invested in the carbon-free electricity and the federal agency has agreed to pay for it. If the contract term is limited to only 10 years, the carbon-free energy will typically be purchased at a higher price than that of conventional power. For example, the developer of a solar project needs an off-taker (whether the local utility or other) to agree to a long-term PPA of 20 years or longer for a project to be financially feasible. In these instances, the utility is risking uncertainty as to whether the federal agency will purchase power for the full term to which it has committed—a risk many utilities are not willing to accept.

A federal agency can also purchase carbon-free energy through a utility that maintains an areawide contract to install, maintain and finance energy and energy-related improvements through a UESC. The utility recovers the resulting energy savings through direct payments from the federal agency to pay for the project over a period of time. Payments made by a federal agency equate to the cost savings created by conservation. UESCs often include solar power or other energy generation, in addition to energy efficiency, typically for up to 25 years.

4 Procurement Guide for Public Utility Services: A Practical Guide to Procuring Utility Services for Federal Agencies," U.S. General Services Administration, August 2015, p. 5, http://www.gsa.gov/portal/mediaId/240463/fileName/Procurement_Guide_for_Public_Utility_Services_08-2015.action.

5 Please note that this chapter is focused on federal contracting authorities. However, federal agencies also must comply with state laws governing electric utility service.

6 "Public Buildings, Property, and Works," U.S. Code 40, § 501.

7 Code of Federal Regulations, "Acquisition of Utility Services," title 48, sec. 41.103(a). Additionally, GSA has delegated its authority for connection charges to VA.

8 Code of Federal Regulations, "Acquisition of Utility Services," title 48, sec. 41.103(b) and (c).

9 Code of Federal Regulations, "Acquisition of Utility Services," title 48, sec. 41.204(c).

10 Code of Federal Regulations, "Acquisition of Utility Services," title 48, sec. 41.101-205(a).

11 Code of Federal Regulations, "Use of Government Sources by Contractors," title 48, sec. 51.205(d).

Interagency Agreements

Federal agencies use interagency agreements (e.g., consolidated purchase, joint use, or cross-service agreements) when acquiring utility services or facilities from other federal government agencies.¹² Such agreements must comply with the procedures of FAR Part 17.502-2 and the Economy Act (31 U.S.C. § 1535). These permit long-term PPAs when the federal agency (like WAPA) acquiring the power from the power producer is authorized to execute 30-year contracts. An example of an interagency agreement is described within the WAPA-Navy discussion below. However, interagency agreements are not ideal because they are not available throughout the country and implementation can be complicated.

Energy Savings Performance Contracts (42 U.S.C. § 8287) and Utility Energy Service Contracts (42 U.S.C. § 8256)

Under an ESPC, a federal agency enters into a contract to achieve energy savings and benefits ancillary to that purpose, with a maximum term of 25 years.¹³ Under an ESPC, the contractor is responsible for the costs of implementing energy savings measures, including the costs of energy audits; acquiring and installing equipment; and training personnel, in exchange for a share of any energy savings directly resulting from implementation of such measures during the term of the contract.¹⁴ The Federal Energy Management Program provides a software program on its website setting forth the escalation rates for the ESPCs.¹⁵

Similarly, a utility can enter into a contract for energy conservation measures with federal agencies under a UESC. In addition to the DOD-specific UESC authority described above, other federal agencies may also participate in UESCs pursuant to the requirements of 42 U.S.C. § 8256, typically through an areawide contract.¹⁶

The UESC is a widely available tool that warrants utilization. The Biden Administration should review policies that limit construction of renewable projects to separate facilities and promote the use of this authority for improving government facilities and permitting energy production as part of projects.

Additional DOD Power Purchasing Authorities

Given DOD's need for power and its mission, Congress has adopted additional statutes available only to DOD. In addition to DOD's ability to use GSA utility authorities¹⁷ for 10-year agreements, DOD is authorized to engage in long-term power purchasing. One such authority, 10 U.S.C. § 2922a, permits DOD to enter into certain long-term contracts for up to 30 years with private developers for electric power produced on either military installations or private property.

This has been a key authority for DOD that Congress could extend to civilian agencies, as noted below.

After installation, the developer owns, operates and maintain the facility for the life of the contract. The military department purchases the electric power generated by the facility and pays for some or all of the facility through its power payments over the life of the contract. Such a contract allows the military department to acquire electric power without providing the capital costs at the time of construction of the facility. The costs of the contract for a particular year may be paid from annual appropriations for that year.¹⁸ The impediments to implementing these projects include the requirement for the military service to obtain the DOD's approval and to notify Congress; restrictions on building the facility on other federal property or state and local government property; and the time needed to procure these projects. Policy changes and legislative updates could clarify these requirements.

Key provisions of 10 U.S.C. § 2922a are as follows:

- **Maximum Contract Term** – 30 years¹⁹
- **Authority** – Provision and operation of energy production facilities on real property under the Secretary of Defense's jurisdiction or on private property and the purchase of energy produced from such facilities
- **Types of Energy Sources** – Apply to any type of energy production facility²⁰
- **Location of Facility** – Applies to a facility on DOD or private land.²¹ According to DOD policy, it does not apply to a facility on non-DOD federal property, e.g., public domain lands not withdrawn for military uses, or on non-federal public property, e.g., state or local government property²²

Any contracts under 10 U.S.C. § 2922a must be approved in advance of award by the Secretary of Defense.²³ The DOD approval authority has been re-delegated to the Deputy Undersecretary for Installations and Environment.

12 Code of Federal Regulations, "Acquisition of Utility Services," title 48, sec. 41.206.

13 "The Public Health and Welfare," U.S. Code 42, § 8287(a)(2)(d).

14 "The Public Health and Welfare," U.S. Code 42, § 8287(a)(1).

15 "Energy Escalation Rate Calculator Download," Department of Energy, <http://www.energy.gov/eere/femp/energy-escalation-rate-calculator-download>.

16 For DOD 10 U.S.C. § 2913 (gas & electric) and 10 U.S.C. § 2866 (water). UESC maximum contract term is determined by federal agency policy (typically also 25 years).

17 "Public Buildings, Property, and Works," U.S. Code 40, § 501(a)(2).

18 "Armed Forces," U.S. Code 10, § 2922(a) and (c).

19 "Armed Forces," U.S. Code 10, § 2922(a).

20 Ibid.

21 "Armed Forces," U.S. Code 10, § 2922(a)(2).

22 John Conger, Acting Deputy Under Secretary of Defense (Installations and Environment), "Memorandum for Assistant Secretary of the Army (Installations, Energy and Environment), Assistant Secretary of the Navy (Energy, Installations and Environment), Assistant Secretary of the Air Force (Installations, Environment and Logistics); Subject: Financing of Renewable Energy Projects Policy," 9 November 2012.

23 "Armed Forces," U.S. Code 10, § 2922(a).

Enhanced Use Leases (10 U.S.C. § 2667)

10 U.S.C. § 2667 authorizes the secretaries of the military services to lease non-excess property through an Enhanced Use Lease (EUL) or a site development lease. EULs must include cash or in-kind payment by the lessee for an amount not less than the fair market value of the lease interest.²⁴

The term of an EUL can be for more than five years if the secretary concerned determines that a longer lease will promote the national defense or the public interest.²⁵ As further described below, combining EULs with PPAs may have budgetary scoring implications. Hence, the EUL can be used for siting, but may be difficult to use for purchasing power produced by a carbon-free electricity source. Most energy EULs are for terms exceeding 30 years and have been successful for military departments when the developer sells the power into the grid or to a local utility.

EULs are a good use of property not currently in use by the military department, and also can be used for power production. Further, some military departments have built-in resilience requirements to divert the power to the base during emergencies and to use the in-kind payments from the developer to develop backup battery generation for the facility.

DOD Utility Energy Service Contracts (10 U.S.C. § 2913)

Under 10 U.S.C. § 2913, a utility may install, maintain and finance energy and energy-related improvements for DOD departments through UESCs. The DOD UESCs work similarly to the GSA UESCs and can be combined for the utility that takes over a utility conveyance (below) or a separate utility. UESCs often include energy generation in addition to energy efficiency and typically last up to 25 years.

Utility Conveyance (10 U.S.C. § 2688)

In accordance with 10 U.S.C. § 2688, a military department secretary may convey all or part of a utility system to a municipal, private, regional, district or cooperative utility company or other entity.²⁶ In return, the new owner agrees to operate and maintain the utility system, as well as undertake upgrades and improvements to the system over the course of the contract, which typically lasts for 50 years.

In exchange for the conveyance, the secretary may require as consideration an amount equal to the fair market value (as determined by the secretary) of the right, title or interest of the United States conveyed.²⁷ The consideration may take the form of a lump sum payment or a reduction in charges for utility services at the military installation at which the utility system is located.²⁸ The maximum term of a utility contract under this authority is 50 years.²⁹

These so called “utility privatizations” can be used—but typically are not—for large carbon-free electricity projects on military bases. The Biden Administration has an opportunity to push for major improvements in contract vehicles to add significant carbon-free electricity development. For example, on-site solar with battery backup generation can be added to these projects and financed by the utility operator, while the military base pays for the energy and back-up resilience.



²⁴ “Armed Forces,” U.S. Code 10, § 2667(b)(4).

²⁵ “Armed Forces,” U.S. Code 10, § 2667(b)(1).

²⁶ “Armed Forces,” U.S. Code 10, § 2688(a).

²⁷ “Armed Forces,” U.S. Code 10, § 2688(c).

²⁸ “Armed Forces,” U.S. Code 10, § 2688(c)(1).

²⁹ “Armed Forces,” U.S. Code 10, § 2688(d)(2).

Western Area Power Administration Authorities

WAPA is one of four PMAs within DOE whose role is to market and transmit wholesale electricity from multi-use water projects. WAPA's service area encompasses a 15-state region of the central and western United States, with a transmission system encompassing more than 17,000 circuit miles carrying electricity from 56 hydropower plants operated by the Bureau of Reclamation, the U.S. Army Corps of Engineers, and the International Boundary and Water Commission. WAPA sells power to preferred customers such as federal and state agencies, cities and towns, rural electric cooperatives, public utility districts, irrigation districts, and Native American tribes.³⁰

In marketing electricity, WAPA must follow many laws, regulations and policies. Section 9(c) of the Reclamation Project Act of 1939 (43 U.S.C. § 485h(c)) (Reclamation Act) established a maximum term of 40 years for WAPA's power sales contracts; the exception is Boulder Canyon, which has a 50-year contract term under the Hoover Power Allocation Act of 2011. The Reclamation Act also prioritizes prospective customers who must be given preference in federal power sales, such as municipal and public utility districts, water and irrigation districts, state and federal entities, Native American tribes, and rural electric cooperatives.

The Reclamation Act also specifies the repayment responsibility of power users: any sale of electric power must produce enough power revenues to cover power users' share of annual operation and maintenance project costs, plus interest on their share of the construction investment.

WAPA transactions with federal agencies also contemplate the use of the Economy Act (31 U.S.C. § 1535), which allows federal agencies to enter into interagency agreements. The combination of the Reclamation Act and Economy Act authorities enable a federal agency within WAPA's service territory to enter into a contract to purchase electric services for up to 40 years.

For WAPA to facilitate a purchase of power produced by a carbon-free electricity source, WAPA enters into an interagency agreement with a federal agency and a PPA with a utility or developer entity. Costs incurred under the PPA are passed through to the federal agency in accordance with the interagency agreement. The federal agency pays a one-time to WAPA to develop the PPA and a negotiated annual charge for contract administration to cover the long-term administrative costs.³¹



30 "About WAPA," Western Area Power Administration, last modified 22 November 2016, <https://www.wapa.gov/About/Pages/about.aspx>.

31 Extraordinary contract administration would incur additional cost, e.g., performance issues with the vendor.

*Example: Renewable Power***30-Year Navy Power Purchase with WAPA Assistance**

Through an interagency agreement, WAPA procured and awarded long-term contracts to help 14 Navy installations in California acquire renewable power to meet Navy requirements for renewable energy from new generation sources.

The interagency agreement identified the authorities relied upon by the parties as the Economy Act, the Reclamation Act and 10 U.S.C. § 2922a. The Economy Act authorizes the head of any governmental agency to place orders with a major organization unit in the same agency or in another agency for goods or services if the order is in the best interest of the government and cannot be provided as conveniently or as cheaply by a commercial enterprise. The Economy Act authorizes WAPA to provide assistance to the Navy. WAPA's ability to purchase power on a long-term basis on behalf of the Navy provides the Navy with needed price predictability and stability.

Under the interagency agreement, WAPA:

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| <ol style="list-style-type: none"> 1. Defines requirements, key project objectives, unique project requirements and performance expectations 2. Conducts market research; develops and implements acquisition strategies in response to program and project requirements 3. Develops requests for proposals and solicits renewable energy and energy-related services | <ol style="list-style-type: none"> 4. Awards and administers renewable energy contracts on behalf of the Navy 5. Invoices the Navy for administrative and energy costs 6. Pays the renewable energy suppliers 7. Conducts annual reviews of performance under the interagency agreement and related contracts, including compliance with legal and regulatory obligations under the renewable energy contracts |
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In turn, the Navy³²:

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| <ol style="list-style-type: none"> 1. Makes sure WAPA is aware of all terms, conditions and requirements necessary to comply with DOD and Navy statutes, regulations and directives 2. Obtains appropriate agency approval for all transaction documents, including those related to renewable energy supply contracts 3. Provides funding for all renewable energy products and services contracts 4. Completes required environmental actions, including those related to mitigation 5. Cannot authorize work, change any contractual documents, modify the authorized scope of work or authorize accrual of costs, except as expressly authorized by WAPA 6. Advises WAPA immediately of any problems or conditions regarding performance by a renewable energy supplier 7. Within 30 days, receives, inspects, accepts in writing and forwards to WAPA the services and renewable energy procurement | <ol style="list-style-type: none"> 8. Executes all responsibilities in a timely fashion in accordance with the Prompt Payment Act (31 U.S.C. Chap. 39) 9. Supports contract close-out functions, including appropriate funding for WAPA-assisted service fees, satisfaction of settlement agreements and claims, and acceptance of any excess funds returned by WAPA 10. Acts as a good steward of the Navy's funds in compliance with applicable laws 11. Designates and provides contact information for the appointed Defense Accounting Official 12. Ensures nominated personnel obtain the necessary training for contracting officer appointment, maintains contracting officer eligibility and promptly notifies WAPA of any new contracting officer 13. Conducts annual reviews of performance under the interagency agreement and related contracts |
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³² The interagency agreement specifically notes that the Navy must ensure that deliverables are received and the quality of the deliverables is acceptable. WAPA, as part of the interagency agreement, encourages the Navy to conduct site visits and inspections and perform close review of all deliverables to ensure that the government receives the contract value.

In most cases, the PPA and/or interagency agreement will include the following provisions:

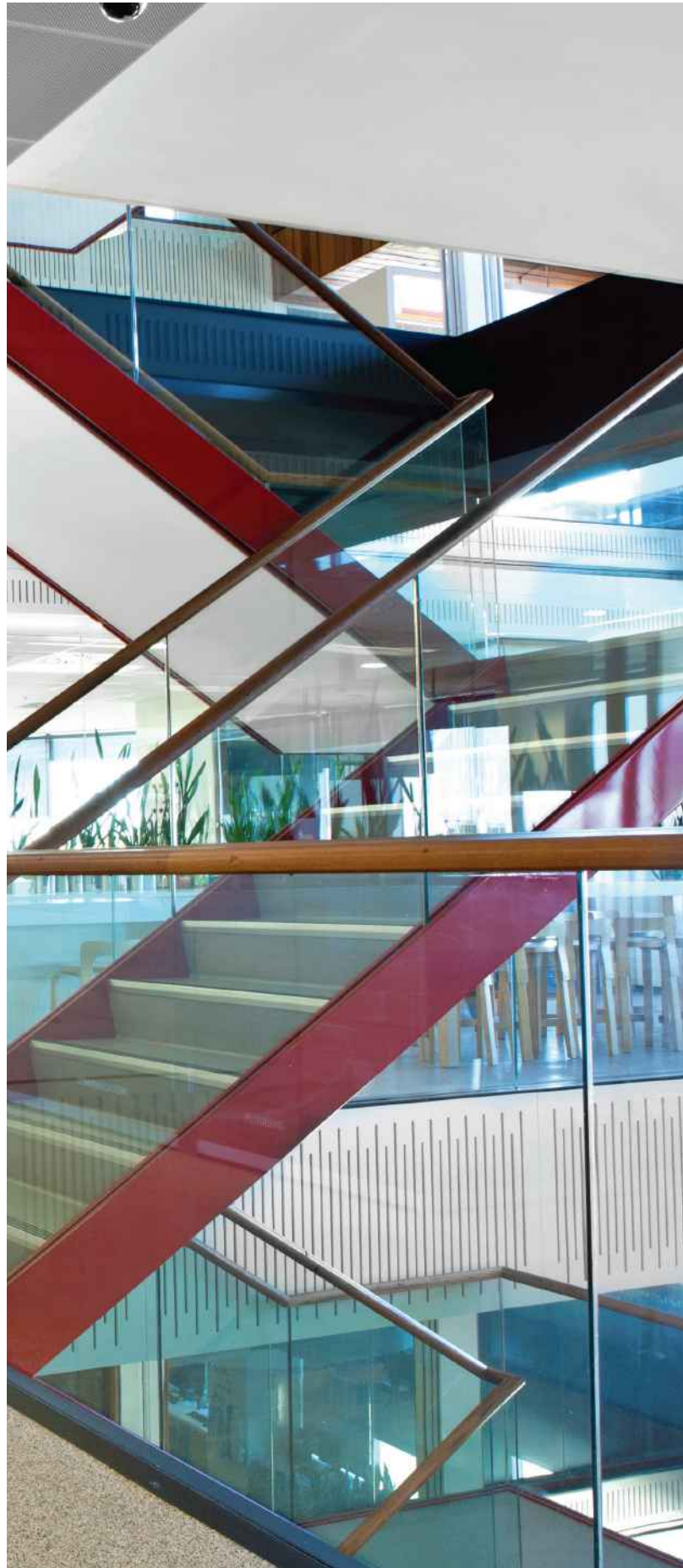
- **Direct Billing.** Requires the utility/developer entity to bill the federal agency receiving the power, and the federal agency receiving the power to pay the utility/developer entity directly, to decrease administrative costs of the project.
- **Accountability.** Holds the utility/developer entity accountable for its obligations (e.g., if the generation fails during the term of the contract) and the federal agency accountable for its obligations (e.g., payment contingent on appropriations, site lease, etc.).
- **Off-Ramp Provisions.** Ends the agreement if the project cannot go forward, e.g., the utility/developer entity cannot obtain licensing for the carbon-free electricity source, is unable to obtain a site lease for the development of the facility, is unable to obtain an interconnection agreement with the local utility, or cannot obtain financing.
- **Applicability of Federal Law.** Applicable federal laws (such as the Freedom of Information Act, Equal Employment Opportunity laws, Contract Dispute Act, etc.) are referenced.
- **Other Provisions.** Other key provisions will be included, such as prohibitions on indemnifying the other contracting party or engaging in binding arbitration.

WAPA agreements require the federal agency receiving the power to assume all risk of delivery and payment. As such, WAPA assists with the power purchase to the extent of its legal authority and role in the western United States.

The transaction structure outlined in this section requires that the utility/developer entity selling the power (WAPA) and the federal agency purchasing the power (Navy) work closely together. Both Navy and WAPA leadership supported the transaction, making it more likely the project would be completed in a timely manner despite the many offices within each organization required to review and approve the specifics. It also included a virtual PPA component.

Projects Funded Through Appropriations

In lieu of using the aforementioned authorities to purchase utilities, federal agencies also have the discretion to pay for the development and continuation of a carbon-free electricity source project through budgeted funds. However, in the current budget environment, appropriated funding is constrained and cannot meet all the needs of the federal government on its own.



Office of Management and Budget Scoring Issues

Scoring is how the White House OMB manages agency budgets on behalf of the White House. Since the federal government has no capital budget, and therefore fails to link debt with annual or capital expenditures, the OMB controls an agency's budgetary authority regardless of whether outlays will be made in the current year or in an out-year as a result of a long-term contract.

Through the use of OMB Circular A-11, OMB draws a distinction between capital and operating costs and leases through a series of tests. If OMB determines that a project is a capital lease, the amount of money that may be spent under the contract—regardless of the year of actual payment—must be “scored” in the agency's budget during the year in which the contract is executed and the obligation incurred. The general rule for scoring is that, when an agency enters into an agreement characterized as a capital lease, the contract will be scored in the year in which the budgetary authority is first made available in the full amount of the government's total estimated legal obligations over the entire course of the lease or the purchase. In contrast, if the project is characterized by OMB as an operating lease, then the agency only needs budget authority on a year-by-year basis, similar to accounting for a commercial mortgage.

OMB scoring is an in-depth review of any project in which the federal government is the purchaser of a good or service on federal land. The scoring rules are complex, and this section is only an introductory outline of the issues.

For example, if DOD signs a 10-year contract in 2021 to pay \$3 per year, OMB can score the contract one of two ways. OMB can require DOD to score \$30 in 2021 (10 years x \$3) and nothing for 2022 through 2030, for a capital lease, or OMB can require DOD to score \$3 each year from 2021 to 2030, for an operating lease. As a practical matter, few agencies can afford the capital method of scoring the acquisition of a capital asset; they need the missing \$27 now, not over a nine-year period.

Appendix B of OMB Circular A-11 details the scoring rules applicable to leases and lease-purchases and states in part:

Agencies should consult with OMB in cases where enhanced use leases and public-private partnerships are involved. Public-private partnerships should not be used solely or primarily as a vehicle for obtaining private financing of Federal construction or renovation projects. Such transactions should be used only when they are the least expensive method, in present value terms, to finance construction or repair. Agencies should consult with OMB in cases where a contract requires a private contractor to construct or acquire a capital asset solely or primarily to provide the service to the Government to determine the appropriate treatment or obligations.

Thus, in evaluating any energy or carbon-free electricity source project where the federal government is a purchaser of the power, the agency will need to determine which scoring rules apply. For example, an agency entering into a PPA to receive power that is not generated on federal land and otherwise meets the conditions described above likely will score only the amount due under the first year of the contract. Alternatively, if the power source is located on federal land and/or has no other non-federal purchaser of that power, it is likely that the project will be scored as a capital lease with the full amount of the government's payments scored in the year of contract execution. Further, if the project is built on federal land of one agency, but the power is purchased by another agency or even the same agency on separately owned land, the transaction will likely not be scored as a capital lease.

Please note potential exceptions to these general outlines, such as 10 U.S.C. § 2922a; each case must be reviewed on the facts of the project. How the project is scored by OMB in accordance with OMB Circular A-11 will influence whether or not the agency can proceed with the contract.



The Path Forward for Carbon-free Electricity Supplies

Federal agencies have significant purchasing power that can provide meaningful support to advancing commercial deployment of carbon-free electricity sources. The delivery of reliable electric power is essential to the ongoing operations of federal facilities, and directing these expenditures to achieve a policy goal is an efficient use of government financial resources. Despite the compelling rationale for utilizing federal PPAs, federal agencies face a complex and challenging process for entering into such transactions.

Once the policy objective has been established to support commercial deployment of carbon-free electricity sources through the utilization of federal PPAs, a federal agency will need to shape the acquisition strategy to address a number of factors. This process can be summarized in six major steps, as described below.

- 1. Determine Long-Term Load Requirements:** As a source of baseload power, the carbon-free electricity source will serve a portion of the federal agency's total energy load. The federal agency will need to determine its load requirements over the period of the potential PPA term, according to the agency's mission, its load profile, current sources of power supply, and expectations related to future changes. Determining load requirements is a long-term planning exercise akin to an integrated resource plan developed by a utility and should result in the quantification of loads to be served by the carbon-free electricity source. The federal agency also may want to consider how the carbon-free electricity source fits into its energy portfolio, including diversity of supply, forward price hedging and clean energy goals.
- 2. Identify Alternatives for Meeting the Projected Load:** To analyze the carbon-free electricity source PPA, the federal agency will need to review alternative sources of power that will affect its cost of service over the long term. The key consideration for the federal agency will be the cost added or avoided by entering into a long-term PPA. Cost information likely will be required for the agency or departmental approval process, and the economics will be one of several evaluation criteria.
- 3. Evaluate Economics of Each Option:** Evaluating the economics of alternative sources of power supply requires a forward-looking analysis of energy loads and sources of supply. Fundamental to this analysis is a base case against which alternatives can be compared. The base case should contemplate the buyer's long-term objectives in terms of different generation sources, exposure to market volatility and policy objectives/compliance. In addition, the planning horizon requires an estimate of electric power cost escalation. After establishing the base case, the avoided/added cost associated with a carbon-free electricity source PPA can be determined. Costs can be enumerated for annual periods and on a net present value basis. The extent to which costs rise should be weighed against the public policy objectives being pursued (soon this analysis may include the cost of climate change impacts).
- 4. Determine Contracting Approach and Scoring Implications:** The terms and conditions of the PPA will be influenced directly by the legal authority under which the acquisition is pursued and executed. Accordingly, the federal agency must identify how it can legally enter into a long-term contract with the carbon-free electricity source counterparty to deliver energy over the desired term. As noted previously, careful structuring is required to ensure the utilization of any particular legal authority does not result in negative budget scoring treatment. While an agency can refer to numerous federal precedents for long-term energy purchases, each situation is unique and entails careful legal structuring to address the needs of each counterparty and achieve the desired budgetary and economic outcome. Additionally, the federal agency must review applicable state laws to confirm that the proposed transaction complies with the applicable state laws governing the provision of electric utility service.
- 5. Develop Procurement Plan:** Depending on the specific circumstances of the federal agency, the power procurement may involve a competitive solicitation or direct coordination with the local load-serving utility. Therefore, the federal facility will need to identify alternatives for procurement and develop a plan for selecting a provider of electricity produced by the carbon-free electricity source.
- 6. Negotiate Terms and Execute Contract:** Depending on whether the contract vehicle for the PPA is a FAR-based contract under the authorities of a PMA or the Tennessee Valley Authority, or a standard commercial contract, the terms and conditions will be very different. The federal agency will need to negotiate terms to meet its specific requirements, with contract terms achieving a balanced risk profile such that the contract can support the project's financing needs.

Each of the steps outlined above involves significant technical, financial and legal resources. While the process will be similar for each federal agency, achieving economies and standardization will be a challenge. However, the process could be streamlined with the development of policies and legislative changes targeted at advancing the commercial deployment of carbon-free electricity sources and tailored to supporting longer-term PPAs.

Impediments to Utilizing Certain Other Legal Authorities for Power Purchases

While a wide range of legal authorities enable the federal government and its various departments to purchase power, each of these authorities is limited in its application and is subject to different interpretations at the federal agency level. The length of contract term represents a significant constraint. The most common authorities are limited to a maximum of a 10-year contracting term, which makes financing larger investments more challenging. Additionally, as described above, certain legal authorities are applicable only in certain situations such as for renewable energy or for power generated on a federally owned facility. For example, current guidance requires that PPAs associated with an ESPC or UESC can be used only for power *attached to a facility* being improved.

Where longer-term contracts are possible, federal agencies are often challenged to balance the needs of project financiers with the requirements and restrictions associated with budget scoring. Commitments that satisfy the investment community often characterize the project as a capital lease, thereby requiring budget authority up front in the year of contract execution. Since energy purchases are treated as an operating expense, requiring budget authority up front renders a project unaffordable because appropriations will be required well ahead of outlays for the consumption of electricity.

To overcome some of the obstacles and better support the financing of a carbon-free electricity source project with federal customers, legislative changes could include the following:

1. Extend GSA authority for certain types of power sources

Amend 40 U.S.C. § 501 to permit longer contract terms (i.e., 25 to 40 years) for nuclear power or other types of energy that require more regulatory approvals or expensive financing than other power sources

2. Extend DOD's 10 U.S.C. § 2922a authority to civilian agencies

Amend 10 U.S.C. § 2922a to apply to a broader federal audience than only DOD

Apply 10 U.S.C. § 2922a to nuclear power and other types of carbon-free energy that require more expensive financing than other power sources

3. Create a new legal authority

Similar to amending 40 U.S.C. § 501, create a new legal authority that permits federal agencies to purchase carbon-free electricity source produced power for a term of 30 years

In the near-term, the Biden Administration could issue interpretative guidance to clarify how legal authorities and the federal power marketing agencies can be utilized by federal agencies, how PPAs can address legitimate requirements of project financiers and how PPAs should be treated for budget scoring purposes. Finally, in carrying out the Executive Order 1408, agencies will need to give the responsibility for achieving carbon free electricity targets to the agency offices that purchase utility services and manage real estate. This is best accomplished at the portfolio level, providing the agency with the ability to take advantage of regional differences in carbon free electricity markets.

Seth Kirshenberg is a partner and co-leader of the energy practice at Kutak Rock LLP, where he has completed billions of dollars in federal energy projects. Brian Oakley is executive vice president of the public infrastructure advisory group at JLL. Oakley and Kirshenberg have co-authored position papers and legislative proposals on government incentives to promote the purchasing and development of renewable and other carbon-free energy.

Both Brian and Seth have worked for federal, state and local governments for over 25 years assisting them to implement P3 programs, including energy programs around the world. This summary is based on our experiences of facilitating energy projects to move from concept, through the procurement and finally negotiation, development, finance, construction and implementation processes.



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