

ESPC ESA Case Study: Energy Affordability at the Drug Enforcement Administration

The U.S. Drug Enforcement Administration's (DEA's) El Paso Intelligence Center (EPIC), located on Fort Bliss in El Paso, Texas, recently installed 2.5 MW DC of photovoltaics (PV). This energy conservation measure (ECM) was completed under an energy savings performance contract energy sales agreement (ESPC ESA, also referred to as an ESPC with an ESA ECM),¹ using the U.S. Department of Energy (DOE) ESPC ENABLE contract vehicle.

This project demonstrates one of DOE's Office of Energy Efficiency and Renewable Energy's key objectives: energy affordability. The project represents an economical clean-energy solution that provides excellent construction and other trades-related jobs—at a cost savings to DEA. This case study provides information that will help future ESPC ESA projects be successful and provide cost savings.

Project Goals and Accomplishments

The PV ESA ECM was bundled with energy-efficient lighting and water conservation ECMs as part of a comprehensive ESPC ENABLE project. The ESA price is at or below the utility rate, resulting in the annual savings required to meet the ESPC statutory savings requirement.



DEA's 2.5 MW-DC PV system helps the agency meet energy-related mandates for federal facilities and saves approximately \$288,000 annually (nominal dollars).

Photo courtesy of DEA.

The project kicked off in October 2016 and was awarded to Ameresco in September 2017. The PV ESA ECM became operational in August 2018. The PV ESA ECM is owned, operated, and maintained by Ameresco for the 20-year contract period.

The Office of Management and Budget requires an agency to retain title to on-site generation equipment by the end of the contract for annual scoring. At the end of the contract the PV ESA ECM title will transfer to DEA at its fair market value (FMV), appraised at the time of title transfer. The total ESPC ESA price that the contractor charges the government includes a reserve account payment (based on an initial FMV estimate), and the total amount of funds collected over the 20 years will be used for the FMV title transfer. The FMV will be re-evaluated at year 10 and the reserve account will be adjusted if needed. DEA will have operations and maintenance responsibilities after title transfer.

Other Project Details

The project managers successfully secured a DOE Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grant. The AFFECT funds were used for “year

zero” PV ESA ECM expenses (including the investment grade audit [IGA], interconnection agreement, and permits, as well as geotechnical and other studies), resulting in a lower ESA price. The grant was not used for materials or construction because this would have lowered the tax incentive benefit.

Benefits of Using an ESPC ESA—Private versus Government Ownership

During the IGA process, Ameresco presented DEA with pricing for government and private ownership scenarios. DEA selected the private ownership option, which will save the agency more than \$1 million (nominal dollars) over 20 years compared with the government ownership option. Under a private ownership option, a private owner can take advantage of the federal investment tax credit (ITC) and Modified Accelerated Cost Recovery System (MACRS) depreciation tax incentives and pass the savings on to the federal agency in the form of a lower contract price for electricity.

¹ An ESPC ESA is a project structure, similar to a power purchase agreement, that uses the multiyear ESPC authority to implement distributed energy projects—referred to as ESA energy conservation measures (ECMs)—on federal buildings or land. The ESA ECM is initially privately owned for tax incentive purposes, and the federal agency purchases the electricity it produces with guaranteed cost savings. The project is referred to as an ESPC ESA if the ESA is the only ECM, whereas it is referred to as an ESPC with an ESA ECM if the ESA is bundled with other ECMs.

Keys to ESPC ESA Project Success

The project is considered a success by DEA staff. Project Manager Mike Sandler received a 2018 FEDS Spotlight recognition and a 2019 Federal Energy and Water Management Award from the Federal Energy Management Program (FEMP). The following factors helped make the project successful:

- DEA engaged its senior management early in the project development process, allowing them to help champion the project.
- A strong project team consisting of a motivated project manager, an effective contracting officer, an on-site facility manager, and an experienced contractor kept the project on track.
- The contractor, DEA, and the Army post maintained a good working relationship.

FEMP supported the project with a DOE-approved project facilitator who assisted with the ESPC ENABLE process, including expert advice on structuring the Notice of Opportunity, evaluating expressions of interest, reviewing the final proposal, and drafting contract language. The AFFECT grant award also helped assure DEA executives that this project had support and encouragement from DOE.



DEA's solar project team. Photo courtesy of DEA.

Project Considerations and Lessons Learned

The following are key considerations for agencies implementing an ESPC ESA project.

Maximize financial benefits—The financial benefits of the ESPC ESA structure allowed DEA to maximize the benefits of solar PV on their limited building portfolio.

Negotiate quickly—Agency staff should expedite negotiations as much as possible to maximize the ITC benefit (the ITC will be phased down to 10% by 2022)² and thus keep the ESPC ESA-offered unit price low.

Consider project ownership—The government and private-ownership options should be evaluated early in the project development process.

Consider technology improvements—Solar PV technology efficiency continues to improve every year, so agencies may get more solar per acre than estimated a few years ago.

Conclusion

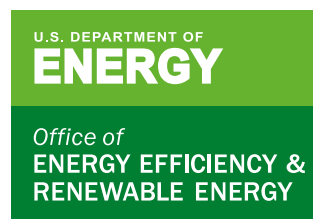
Federal agencies can benefit from low-cost distributed energy without upfront capital by utilizing an ESPC ESA. The following contract vehicles can be used to implement ESPC ESAs: DOE indefinite delivery/indefinite quantity (IDIQ) ESPC, DOE ESPC ENABLE, and site-specific/stand-alone. The Department of Defense can also use the U.S. Army Corps of Engineers multiple award task order contract (MATOC).

ESPC ESA Project Assistance

To assist federal agencies with project execution, FEMP offers a variety of ESPC ESA resources at energy.gov/eere/femp/energy-savings-performance-contract-energy-sales-agreements, including fact sheets and editable templates.

To get started on an ESPC ESA project, please do one of the following:

- Contact a Federal Project Executive at energy.gov/eere/femp/energy-savings-performance-contract-federal-project-executives-0
- Request assistance through the FEMP Assistance Portal at www7.eere.energy.gov/femp/assistance/. ■



For more information, visit:
energy.gov/eere/femp

² See FEMP's "Investment Tax Credit Requirements for Privately Owned Solar Photovoltaic Systems on Federal Sites" fact sheet: energy.gov/sites/prod/files/2019/08/f65/investment-tax-credit.pdf.