



**Questions and Answers for Philadelphia Energy Authority RFI:
Ideas for Virtual Power Plant (VPP) Implementation**

Q. Is PEA open to a solution that provides financing of energy efficiency appliances for (Low-to-Moderate Income) LMI and disadvantaged communities even if not all of the appliances are VPP-enabled?

A. Yes.

Q. Is PEA able to fund a loan loss reserve to enable financing to be provided to underserved borrowers?

A. If a loan loss reserve is required to provide solutions, please specify that in your response. PEA may or may not be able to provide it.

Q. Does PEA anticipate having access to Federal High-Efficiency Electric Home Rebate Act (HEEHRA) LMI electrification incentives? If so, how much...and could these incentive dollars be channeled through this solution?

A. PEA is currently waiting for the Department of Energy (DOE) to write guidelines around the High-Efficiency Electric Home Rebate Act (HEEHRA). Once drafted, the guidelines will be handed down to state energy offices to administer the funds. Depending on how the state chooses to administer the funds, PEA may have access to them but it is too early in the process to determine whether we'll have direct access to the funds with any certainty. If you are assuming access to HEEHRA funds, please specify that in your response.

Q. Please clarify PEA's expected role in the Virtual Power Plant. Would PEA expect to play a role in managing/operating the VPP? Or would PEA simply support marketing and resource recruitment?

A. PEA will establish objectives and goals for the VPP in partnership with our selected VPP provider but we don't expect to play a role in managing or operating the VPP day-to-day. We plan to integrate our existing programs with the VPP, broadly support marketing, and help with recruitment. Nonetheless, we will require and expect VPP providers, either in-house or as part of a broader implementation team, to lead overall marketing and recruitment efforts and drive the adoption of VPP assets.

Q. Would PEA assist with the recruitment of City-owned buildings to participate in a VPP program?

A. Yes.



Q. Is electrification of buildings (e.g., conversion of gas water heaters to conventional electric, or heat pump water heaters) supported through additional EE funds, considering that PEA also delivers natural gas to its customers?

A. PEA does not deliver natural gas and does not have customers. We directly fund LMI residential building electrification through our [Built to Last program](#) and offer financing options for commercial and multi-family building electrification.

Q. Does PEA have a perspective on what entity would be the offtaker for the grid services from the VPP? Would all grid services be sold into PJM, or is there a potential for some bilateral agreement with PECO to purchase the power from the VPP?

A. At this time, we assume all grid services would be sold into PJM. If respondents would like to recommend other offtake arrangements, please do so in your response.

Q. Is PEA able to access any local funding that can be modeled into the economics of the VPP? Such as subsidies for certain technology or devices?

A. Yes, it is likely that PEA will be able to access and facilitate tax credits, rebates and other resources built into recent federal and state legislation. PEA cannot provide further details at this time.

Q. Is there currently any high-level timing in regard to establishing a market to support VPP's in Philadelphia, and if so when might an RFP be released?

A. PEA seeks to take further action on a VPP in late 2023.

Q. Will PEA be the conduit for AMI data to support VPP's, or will PECO and PGW need to provide that data directly?

A. PECO and PGW will need to provide AMI data directly. PEA can facilitate that discussion.

Q. Are you considering a Distributed Energy Resources Management System (DERMS) provider?

A. VPP solutions may include a DERMS platform if necessary. No specific platforms have been selected.

Q. Will there be a Flexmarket created in the PEA territory?

A. We welcome RFI responses that provide details on the benefits of a Flexmarket and recommendations on how it could be implemented.



Q. How will you consider greenhouse gas (GHG) impacts/avoidance?

A. We welcome suggestions in RFI responses.

Q. How are you considering measurement and verification (M&V)?

A. No M&V protocol has been specified yet. We welcome M&V suggestions in RFI responses.

Q. Will targeting be leveraged to locate optimal participants?

A. PEA supports targeting and segmentation to provide valuable and appropriate VPP options to Philadelphia's diversity of residents and building stock. We hope that our VPP will expand access to distributed energy resources (DERs) for all Philadelphians.

Q. Please define City's 'most vulnerable residents' for purpose of the VPP initiative by type, volume, location, oversight authority i.e. city, county, state, federal. Does this include residential, 'single-family and multi-family', as well as commercial property owners and renters?

A. For the purposes of our VPP Program, the City's most vulnerable residents primarily include low-income renters, property owners and others with a high energy burden. These residents are spread across single- and multi-family buildings including commercial property owners that provide organically occurring and subsidized affordable housing. The VPP should include these populations as well as others.

Q. What was the full size of Solarize Pilot program by kW (and/or) kwh, # of individual locations, and average kW per location? Will PEA or affiliated partners provide access to solar photovoltaic (PV) active address data, segmented by property type, as well as targeted address for future PV + Energy Storage Systems (ESS) deployment?

A. Almost 1,200 Solarize Philly contracts have been signed for the installation of PV, with an average size of 5.3 kW. PEA will work with selected VPP providers to offer enrollment to existing and future Solarize Philly participants in our VPP Program.

Q. What specific proactive steps will PEA take to automate participant qualifying and (Commercial Property Assessed Clean Energy) C-PACE application process for targeted building stock and/or associated building owners and occupants?

A. To the extent allowed by law, C-PACE enabling legislation and local C-PACE ordinance, PEA intends to offer VPP Program participation to property owners participating in Philadelphia's C-PACE program. Automation and pre-qualification as part of the C-PACE application process will be dependent on the VPP enrollment needs.



Q. What amount has been earmarked from the \$1B Philadelphia Energy Campaign for VPP Program deployment in total or by year thru 2026?

A. The Philadelphia Energy Campaign is a goal of investing \$1 billion over 10 years in energy efficiency and clean energy projects to build an equitable clean energy economy in Philadelphia and create 10,000 jobs. Through 2021, PEA has supported \$291MM in investments and helped create over 2500 jobs. These projects are typically financed. For example, almost \$70MM of financing has been provided by third party lenders through our C-PACE program, and \$125MM in green bonds have funded energy efficiency projects at the School District. Additional federal funding from recent legislation may support direct investment in certain components of VPP.

Q. If the entirety of the \$1B fund is not fully allocated by end of year 2026, will the Philadelphia Energy Campaign program be extended as a means to further build upon program successes until all funds have been allocated?

A. See response above. PEA's work will continue beyond the Energy Campaign.

Q. What are PEA's specific annual objectives regarding percentage or actual dollar savings realized by individual residential or business property owners, or the City of Philadelphia? Are there specific per site Net Present Value (NPV) or Internal Rate of Return (IRR) values PEA needs to reach to greenlight each site for deployment?

A. No specific objectives have been set for the VPP Program yet. Generally, different programs have different requirements for investment.

Q. Would PEA prefer to source energy capacity and ancillary services by owning the assets, upfront/ongoing incentives, or on a long-term contractable basis?

A. We welcome recommendations or best practices to be shared as part of RFI responses.

Q. To what degree is PEA looking to the VPP Program to reduce household energy burdens and support Philadelphia's established goal of 100% renewables by 2030? Are these measured annually against baseline by percentage of renewables deployed, MWH annual load reduction, sum bill savings, or another metric?

A. Those objectives are key to our VPP program. No metrics have yet been established.

Q. What is PEA's preferred financing structure for this project? Does PGCC work with a non-profit investment partner that can take advantage of Investment Tax Credit (ITC) or should a third-party leverage that value?



A. PEA would prefer a structure that leverages PGCC's ability to blend public and private capital to deliver products that are accessible to different customer and project types. We welcome recommendations on financing in your response.

Q. What specific proactive steps will PEA take in tandem with solar installers or other project vendors to automate related license acquisition?

A. Philadelphia's Department of Licenses and Inspections (L&I) is responsible for issuing licenses for contractors and permits for all solar and construction projects. We have worked with L&I to expedite and simplify the solar permitting process and will continue to advocate for improvements to the process.

Q. What strategic smart appliance partners has/is PEA working with currently, or hope to engage in the VPP program?

A. PEA does not currently have any smart appliance partners.

Q. What strategic electric vehicle (EV) original equipment manufacturer (OEM) or EV charging partners has/is PEA working with currently, or hope to engage in the VPP program?

A. PEA does not currently have any electric vehicle (EV) partners.

Q. What Pennsylvania cities/municipalities, in addition to Philadelphia, would PEA suspect, or have received expressed interest from regarding deployment of similar VPP programs? How would PEA support introductions to key stakeholders within these additional cities/municipalities?

A. PEA and PGCC intend to support VPP delivery regionally, and the Delaware Valley Regional Planning Commission (DVPRC) is a key reviewer of these VPP RFI responses.

Q. Is PEA interested in real-time demand forecasts for customers enrolled in the VPP program?

A. PEA does not need real-time demand forecasts unless they are necessary for VPP Program operations.

Q. Does PEA expect the rate for distributed generation to be similar to a fixed price, time of use or another methodology?

A. PEA does not have preferred methodology for the expected distribution rate.

Q. Does PEA plan to work with a retail electricity provider to market electricity and the VPP program?



A. PEA believes working with a retail electricity provider could be a useful potential model for a VPP Program. PEA does not currently work with a retail electricity provider.

Q. How does PEA set a base-line customer demand to track energy saving initiatives?

A. PEA sets baselines for energy savings estimates in a number of different ways, depending on the program. For residential programs, we typically use recent energy bills. For our commercial programs, like C-PACE, we often use energy surveys based on existing condition, energy modeling or code, depending on construction type to estimate savings.

Q. Are partial responses acceptable given that many VPP providers are small firms with limited resources?

A. Yes. We welcome responses from firms of all sizes and capabilities. If your company has information and/or a solution that would be valuable to a component or aspect of PEA's VPP Program, we encourage you to provide a specific and detailed response to selected components of the RFI along with already developed, general information about your company.