



August 3, 2020

IN THE MATTER OF THE PETITION  
OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY  
FOR APPROVAL OF ITS CLEAN ENERGY  
FUTURE-ELECTRIC VEHICLE AND ELECTRIC STORAGE ("CEF-EVES")  
PROGRAM ON A REGULATED BASIS

Docket No. EO18101111

**Via Email**

Parties in Docket No. EO18101111  
(Service List Attached)

**RE: Witness Substitution**

Dear Parties:

Public Service Gas and Electric Company's ("PSE&G") petition filed on captioned matter included direct testimony by witness Jorge L. Cardenas on the topic of the proposed energy storage projects (Attachment 2 to the petition). Mr. Cardenas has retired from his employment with PSE&G. In substitution for Mr. Cardenas, PSE&G intends to present a two-witness panel comprised of Todd W. Hranicka, Director of Solar Energy and project lead for energy storage and electric vehicle implementation planning, and Raymond C. Alvarez, Senior Director of Asset Strategy, Technology and Systems. The panel will adopt the testimony of Mr. Cardenas in its totality. In general, the panel witnesses will be responsible for the topics included in the Attachment 2 testimony as follows:

**Mr. Hranicka**

- Current state of storage market & trends/opportunities in energy storage
- Sub-program descriptions/mechanisms
- Implementation/deployment
- Procurement Process
- Program Risks and Risk Mitigation Strategies
- Program reporting
- Decoupling/Lost Revenue Mechanism

**Mr. Alvarez**

- Mechanics of grid optimization/renewable & DC integration

- Operational risks
- Ongoing and Administrative Expenses

Attached are supplemental schedules to Attachment 2, Schedule TWH-CEF-ES-1 and Schedule RCA-CEF-ES-1, containing the qualifications of these witnesses. Otherwise, there are no changes to the petition or its attachments.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Katherine E. Smith", with a long horizontal flourish extending to the right.

Katherine E. Smith

Cc:  
Aida Camacho-Welch, Secretary  
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07/21/2020

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**QUALIFICATIONS  
OF  
TODD W. HRANICKA  
DIRECTOR – SOLAR ENERGY**

My name is Todd W. Hranicka and I am employed by Public Service Electric and Gas Company (“PSE&G” or “Company”). My title is Director - Solar Energy PSE&G. I have been employed by PSE&G since September 2012. Prior to my employment with PSE&G, I was Vice President at Vanguard Energy Partners, LLC, one of the east coast’s largest solar construction firms. I have management and oversight responsibility for all aspects of the design and implementation of PSE&G’s Solar Loan and Solar 4 All® Programs, including 3 MW-dc of solar plus battery storage projects. Currently, I am also leading Energy Storage and Electric Vehicle Implementation Planning for PSE&G.

## EDUCATIONAL BACKGROUND

I have a Bachelor of Arts degree in History from the University of Delaware.

## WORK EXPERIENCE

I have been employed by PSE&G for approximately eight years. Prior to joining PSE&G, I worked for Vanguard Energy Partners. As such, I have a broad background in solar construction, design, management, and operations and maintenance. I manage the PSE&G team that has successfully built 158 MW-dc of solar to date. Currently PSE&G is the utility leader in landfill/brownfield solar with 86MW-dc in-service. I also led the team responsible for developing PSE&G's first ever solar and battery storage project at Hopewell Valley Central High School in Hopewell, New Jersey that went in-service in 2015. The Hopewell system provides backup power for a warming/cooling station, emergency lighting and refrigeration in

**ATTACHMENT 2**  
**SCHEDULE TWH-CEF-ES-1**  
**PAGE 2 OF 2**

1 the event of an extended outage. Additionally, my team developed four other solar and battery  
2 storage projects: one at Cooper Hospital in Camden, New Jersey that provides backup power  
3 for refrigeration of vital pediatric medicines; another at the Caldwell Wastewater Treatment  
4 facility in West Caldwell, New Jersey that works in conjunction with an existing onsite  
5 generator to supplement the backup power to the facility to protect against wastewater flowing  
6 into New Jersey's waterways; a solar and battery storage project located at the Pennington  
7 Department of Public Works garage in Pennington, NJ that will keep the facility operating  
8 during an extended outage; and lastly, the Highland Park solar and storage facility located on  
9 a municipal landfill and connected to a 4kV circuit in Highland Park, NJ that went in-service  
10 December, 2019. The batteries at the Highland Park facility will be used to reduce voltage  
11 fluctuations inherent to grid-connected solar systems due primarily to cloud cover and weather  
12 variability. The information gathered from the Highland Park system will enable PSE&G to  
13 better integrate renewable energy onto the electric grid in the future, allowing for more solar  
14 energy projects in New Jersey. For the past ten years, I typically attend Energy Storage  
15 International, Solar Power International, Smart Electric Power Alliance (SEPA) and PV  
16 America Conferences to take part in educational sessions, investigate new technologies, view  
17 demonstrations and generally increase my expertise in the field. I am an active member of  
18 SEPA and am a frequent speaker at industry events.

**QUALIFICATIONS  
OF  
RAYMOND C. ALVAREZ  
SR. DIRECTOR OF ASSET STRATEGY, TECHNOLOGY AND SYSTEMS**

My name is Raymond C. Alvarez and I am employed by Public Service Electric and Gas Company (“PSE&G” or “Company”). My title is Sr. Director of Asset Strategy, Technology and Systems. I have extensive experience in operations engineering, construction and project management, and have been responsible for Electric Asset Strategy in NJ and associated capital investments since 2017.

**EDUCATIONAL BACKGROUND**

I graduated from Rutgers University in 1984 with a Bachelors in Electrical Engineering. In 1992 I received a Master’s Degree in Electrical Engineering with a focus on Electric Power. I also participated in the Con Edison Account Executive Program and the PSEG Leadership Program to continue to enhance my career development. I am a licensed Professional Engineer in NY and NJ, a Certified Project Management Professional and have published multiple papers on Critical Infrastructure Management and Intelligent Substations.

**WORK EXPERIENCE**

From 1984 to 1998 I worked at Con Edison where I spent three years on two Engineering Development Rotation Programs where I spent time in Nuclear, Fossil, Electric Planning, Electric and Fossil Operations and Construction. At the completion of the rotation program I became a Watch Supervisor at Con Edison’s East River Generating Station where I was responsible for the electric generation and steam send out for two fossil power plants. This included the management of bargaining unit personnel working 24x7 shifts. I then became a District Operator at Con Ed where I was responsible for the safe and reliable operation of the Distribution System in New York

1 City. This included running contingency analysis, being the tagging authority and work order  
2 operating authority. I moved into Project Engineering at Con Ed where I developed project scopes,  
3 designs, schedules and budgets for multiple transmission projects throughout the City of NY, and  
4 then into the Customer Service Group where I became the corporate liaison to clients at the  
5 executive level for the Investment Banking Sector, including executive client relationships,  
6 reliability analysis, deregulation support and emergency and technical response for the electric,  
7 gas and steam we supplied our customers.

8 In 1998 I left Con Edison and went to work for Cushman and Wakefield as the Manager  
9 of Critical Systems for the Lehman Brothers Account responsible for the development and  
10 management of the operation, operating budgets and infrastructure capital plans associated with  
11 all critical environments including datacenters, critical power and heating, ventilation and air-  
12 conditioning and fire protection systems at the World Financial Center Headquarters. In 1999 I  
13 was hired by Lehman Brothers and moved over to the owner side where I became the VP and  
14 Global Head of Critical Systems. In 2002 I left Lehman Brothers and moved to Jones Lang LaSalle  
15 a global real estate company where I was a Vice President responsible for the Critical Systems  
16 Practice for multiple clients including Bank of America and Deutsche Bank and eventually became  
17 the Americas Lead coordinating all Critical Systems Operations for the Company for the  
18 Americas. In 2007 I moved over to Skyscraper, a Facilities and Operating Engineering Company,  
19 where I worked as the Chief Operating Officer of the company responsible for multi-state  
20 operations of operations engineering, construction and project management.

21 I joined PSE&G in 2009 and started in Project Management, running transmission and  
22 distribution projects in the Bergen County area. Eventually I redesigned the project development  
23 and origination process to drive efficiencies in the scope, schedule and budget development. In

1    2012 I moved over to Project Engineering and was eventually promoted to a Senior Director where  
2    I was responsible for the cradle to grave project engineering of all transmission and distribution  
3    work. Since 2017 I have been the Senior Director of Asset Strategy, Technology and Systems  
4    where I am responsible for Electric Asset Strategy in New Jersey and for PSEG-LI, capital  
5    investments, Utility of the Future, Engineering and the Utility Energy Management System, which  
6    is used to monitor and operate the Bulk Power System.