



March 10, 2023

Maria Robinson, Director
U.S. Department of Energy
Office of Clean Energy Demonstrations
Grid Deployment Office
1000 Independence Avenue, S.W.
Washington, DC 20585

Re: DLC GRIP Smart Grid Grants Letter of Support

Dear Director Robinson:

On behalf of the Pennsylvania Department of Environmental Protection (DEP), I am submitting this letter to express my support for Duquesne Light Company's (DLC) proposed "Grid Visibility Program" project submitted to the U.S. Department of Energy's (DOE) Grid Resilience and Innovation Partnership (GRIP) Smart Grid Grants program (Bipartisan Infrastructure Law section 40107, DE-FOA-0002740).

This project will advance DOE's smart grid objectives by deploying a set of modern and innovative technologies—smart grid chip (SGC) and dynamic line rating (DLR)—to create complete situational awareness from the transmission system to the edge of the distribution grid. Together, the implementation of these technologies will increase hosting capacity, reduce congestion and the need for clean energy curtailment, unlock additional clean energy generation, enable more resilient grid operations, and support energy equity measures for vulnerable communities.

The project goals and objectives are well aligned with Pennsylvania's 2021 Climate Action Plan (CAP), which outlines strategies to meet greenhouse gas emissions reduction targets. DLC's project supports a cornerstone of the CAP—increasing clean electricity generation offering the greatest potential for emission reductions—by promoting better integration of renewable distributed energy resources (DERs) in Pennsylvania. The project's workforce development initiatives center on artificial intelligence, machine learning, and cybersecurity training, which also align with the CAP's objective to provide resources and education on disruptive digital technologies. This project will also help to mitigate the risk of utility interruption identified in the Pennsylvania Emergency Management Agency's (PEMA) Hazard Mitigation Plan.

DEP fully supports DLC's efforts to seek funding from the GRIP Smart Grid Grants program and looks forward to ongoing collaborative engagement to ensure continued goal alignment. Please contact David Althoff, Director of DEP's Energy Programs Office, at dalthoff@pa.gov or 717.783.8411 if you have any questions regarding DEP's continuing support of DLC's project.

Sincerely,

A handwritten signature in blue ink that reads "Richard Negrin". The signature is fluid and cursive, with the first name "Richard" and last name "Negrin" clearly visible.

Richard Negrin
Acting Secretary

Secretary

Rachel Carson State Office Building | P.O. Box 2063 | Harrisburg, PA 17105-2063 | 717.787.2814 | www.dep.pa.gov

24 February, 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

RE: Bipartisan Infrastructure Law (BIL) - Grid Resilience and Innovation Partnerships
(GRIP) - DE-FOA-0002740
Letter of Support/Duquesne Light Company

To Whom It May Concern,

I write you today to express my support for Duquesne Light Company ("DLC") and their proposed "Grid Visibility Project" ("the Project").

The Project uses new and emerging technology, specifically Dynamic Line Ratings (DLR), to enhance the efficiency and operations of the grid, which could have a significant impact on communities located in the DLC service territory. It seeks to deploy a set of modern and innovative technologies, including DLRs, to create complete situational awareness from the transmission system to the edge of the distribution grid to increase capacity, reduce the need for clean energy curtailment, unlock additional clean energy generation, enable more resilient grid operations, and to support energy equity measures for disadvantaged communities.

Grid-enhancing technologies (GETs), such as dynamic line ratings, have the potential to move power on the grid more intelligently and improve the accuracy of available capacity on transmission lines. Duquesne Light's Project is the right solution to advance its system toward the grid of the future, while also potentially creating jobs and economic growth in the Greater Pittsburgh area.

I urge you to move forward with this project, and I am happy to assist in any way I can. Rewiring America will engage with the project as needed to provide input and advice. Thank you for your commitment to sustainable energy solutions and for your dedication to making a positive impact on our planet.

Sincerely,



Ari Matusiak

Founder & CEO, Rewiring America



LineVision Inc.
529 Main Street, Suite 307
Boston, MA 02129 USA

March 9, 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

RE: Bipartisan Infrastructure Law (BIL) - Grid Resilience and Innovation Partnerships (GRIP)
DE-FOA-0002740
Letter of Commitment/Duquesne Light Company (DLC)

To Whom it May Concern:

This Letter of Commitment confirms the support and involvement of LineVision in the development of DLC's Grid Visibility Program (GVP): Unlocking System-Wide Data to Build a More Resilient and Equitable Grid.

LineVision, a Boston, MA-based Grid Enhancing Technology (GETs) company, is pleased to support DLC in its application under DOE's BIL Grid Resilience and Innovation Partnerships FOA for Topic Area 2. We understand that DOE seeks to deploy and catalyze technology solutions that increase the flexibility, efficiency, and resilience of the electric power system. The GVP Project will advance these objectives by deploying and catalyzing a set of modern and innovative technologies, including Dynamic Line Rating (DLR), to create a complete end-to-end, transmission to grid-edge situational awareness system.

DLC has brought together an extremely well-qualified, diverse, and enthusiastic team for the Project, including LineVision, which has developed non-contact transmission line monitors that measure and securely transmit data to advanced analytical tools to deliver real-time and forecasted DLRs, while also providing real-time awareness of the conductor. Implementing DLR is a critical and necessary element to achieving the clean energy transition. The technology can unlock up to 40% more capacity on existing transmission lines, eliminating congestion and enabling the rapid interconnection of renewable energy resources. DLC and LineVision have been partners working together since 2021; currently, LineVision sensors are installed on three of DLC's transmission lines (one 345 kV and two 138kV lines) and are enabling DLC's LineRate DLR application. On the 345 kV line, DLC has identified an average of 25% additional available capacity, making it easier to expand the integration of renewable energy and meet the region's growing demand for electricity. Due to the initial success of the DLR program, DLC aims to expand the DLR technology to an additional seven transmission lines with this GVP proposal.

DLR can reduce congestion and allow for increased renewables integration; value that can be further enhanced with a holistic approach as proposed in the GVP project to create a bidirectional pathway from the transmission grid to customers at the grid-edge, allowing maximized transmission to enhance overall distribution system and grid-edge flexibility.

Please contact me if you have any questions on the contents of this letter or with respect to LineVision's continuing support of the Project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Hudson Gilmer".

Hudson Gilmer
CEO, LineVision, Inc.

A handwritten signature in blue ink, appearing to read "Hilary Pearson".

Hilary Pearson
VP of Policy, LineVision, Inc.

March 17, 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

RE: Bipartisan Infrastructure Law (BIL) - Grid Resilience and Innovation Partnerships
(GRIP) - DE-FOA-0002740
Letter of Commitment/Duquesne Light Company

To Whom It May Concern,

This Letter of Commitment confirms the support and involvement of Utilidata, having offices in Providence, Rhode Island and Ann Arbor, Michigan, and NVIDIA Corporation ("NVIDIA"), in its sole discretion, having offices in Santa Clara, California, in the development of Duquesne Light Company's ("DLC") "Accelerating and Deploying Grid Edge Computing" project ("the Project"). The project proposes to deploy Utilidata's scalable, distributed artificial intelligence (AI) platform, the smart grid chip, which is being co-developed with NVIDIA. The deployment of this technology will accelerate grid-edge computing capabilities and enhance distributed energy resource (DER) integration.

DLC has brought together an extremely well-qualified, diverse, and enthusiastic team for the Project which will help transform electric utility infrastructure and support the delivery of community benefits to historically underserved communities by enhancing and enabling programs that utilize grid edge data.

Utilidata is pleased to support DLC in its application under DOE's BIL Grid Resilience and Innovation Partnerships FOA for Topic Area 2. We understand that DOE seeks to deploy and catalyze technology solutions that increase the flexibility, efficiency, and resilience of the electric power system. The Project will advance and facilitate the integration of variable renewable energy resources at the distribution level and the aggregation and integration (edge-computing) of electric vehicles (EVs) and other grid-edge electrified loads.

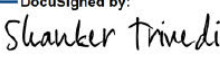
Please contact me if you have any questions on the contents of this letter or with respect to Utilidata's continuing support of the Project.
Sincerely,

Jess Melanson



President & Chief Operating Officer
Utilidata

Shanker Trivedi

DocuSigned by:

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Senior Vice President - Enterprise Business
NVIDIA Corporation



March 2, 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

RE: Bipartisan Infrastructure Law (BIL) - Grid Resilience and Innovation Partnerships
(GRIP) - DE-FOA-0002740 - Letter of Commitment for Duquesne Light Company

To Whom It May Concern,

On behalf of Bridgewater Consulting Group, Inc. ("BCG"), I am submitting this letter to express our commitment to Duquesne Light Company ("DLC") and their proposed "Grid Visibility Project" ("the Project"). BCG is a certified Minority Business Enterprise ("MBE") and proud recipient of the Edison Electric Institute ("EEI") award for Outstanding Service as a Small and Diverse Supplier that provides professional services exclusively to clients in the Utilities industry.

The Project uses new and emerging technology, specifically Dynamic Line Ratings ("DLR") and Smart Grid Chips ("SGC"), to enhance the efficiency and operations of the grid, which could have a significant impact on communities located in DLC's service territory. The project seeks to deploy these technologies to enable holistic situational awareness from transmission to the grid's edge to increase capacity, reduce curtailment, enable more resilient grid operations, and support energy equity measures for disadvantaged communities. Grid-enhancing technologies (GETs), such as DLR and SGC, have the potential to move power on the grid more intelligently and accelerate the integration of clean energy sources. We feel DLC's Project is a strong solution towards the grid of the future, while also potentially promoting job creation and economic growth in the region.

I urge you to move forward with this project. If awarded, BCG will commit experienced resources to support the project. Thank you for the opportunity, your commitment to sustainable energy solutions, and for your dedication to making a positive impact on our planet and community.

For any inquiries, please feel free to contact us at contracts@bridgewcg.com.

Sincerely,

Mark Montgomery

Mark Montgomery
President & CEO
Bridgewater Consulting Group
M: (626) 695-5921 | E: mark.montgomery@bridgewcg.com



March 8, 2023

U.S. Department of Energy, Grid Deployment Office

Office of Clean Energy Demonstrations

1000 Independence Ave SW

Washington, DC 20585

Subject: Support for GRIP Area 2 funding: Duquesne Light Company's Grid Visibility Program

Secretary Granholm,

I am writing to express my support for Duquesne Light Company's (DLC's) Grid Visibility Program ("the Project") submitted to the Department of Energy's (DOEs) Grid Resilience and Innovation Partnership program (GRIP) (DE-FOA-0002740). This Project will advance the objectives of the Department of Energy's GRIP program through the deployment of two modern and innovative technologies that will enable the operations of a more resilient and equitable grid.

My name is Dr. Destenie Nock, and I am an Assistant Professor of Engineering and Public Policy at Carnegie Mellon's College of Engineering, as well as a practitioner in the field of research. I founded an organization, People Energy Analytics (PEA), with a mission to modernize the way the energy industry supports their customers. PEA has developed an effective and efficient way to identify energy poverty and abnormal energy consumption patterns using a novel algorithm to analyze widely available but underutilized data.

I believe this Project has the potential to improve programs that serve low-income customers - both currently receiving assistance from DLC, but also, the segment of customers that are currently eligible for assistance but, for a variety of reasons, have yet to enroll. As part of this Project, I understand that DLC intends to capture robust grid edge and customer data, including in 9 disadvantaged communities throughout its service territory. PEA is interested in exploring how this data can be utilized to better understand energy poverty, and to the extent possible, to provide targeted outreach to households that would greatly benefit from one of the many energy assistance programs offered by DLC.

I look forward to working with DLC should the opportunity arise for future collaboration, and should the DOE have any questions about my support for this project, please do not hesitate to contact me directly.

Sincerely,

A handwritten signature in black ink that reads "Destenie Nock".

Dr. Destenie Nock

Co-founder of People's Energy Analytics and Assistant Professor at Carnegie Mellon University

destenie@peoplesenergyanalytics.com



27 February 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

To Whom It May Concern:

This Letter confirms the support and involvement of Pittsburgh Gateways Corporation (PGC), having offices at 1435 Bedford Ave, Pittsburgh, PA 15219, in the development of Duquesne Light Company's (DLC's) Grid Visibility Program ("the Project") submitted to the Grid Resilience and Innovation Partnership program (GRIP) (DE-FOA-0002740).

PGC is pleased to support DLC in its application under DOE's GRIP FOA for Topic Area 2. We believe the Project will advance DOE's smart grid objectives by deploying grid enhancing technologies to provide situational awareness from the transmission system to the edge of the distribution grid. Together, these technologies will increase hosting capacity, reduce the need for clean energy curtailment, unlock additional clean energy generation, enable more resilient grid operations, and support energy equity measures for disadvantaged communities.

PGC's mission is to provide strategic planning, development and direct management assistance for communities, community-based economic development organizations, research & academic institutions, and private entities seeking the acceleration of technology-based businesses. Incorporated into this mission is our goal to combat community deterioration in the City of Pittsburgh and other economically distressed areas of Pennsylvania. PGC is registered as a 501(c)(3) non-profit organization.

PGC is committed to supporting this project and envisions it will create a pipeline for individuals from disadvantaged communities to access much-needed training and quality jobs in the clean energy sector. In addition, the project will increase reliability and resilience in our community, especially in the event of the many extreme weather patterns experienced in our region. We will engage with DLC throughout the project to advise and collaborate on workforce development planning, goal setting, execution, and other community benefits.

Please contact me if you have any questions regarding Pittsburgh Gateways Corporation's support.

Sincerely,

A handwritten signature in black ink, appearing to read 'Donald E. Evans'.

Donald E. Evans
President & CEO, Pittsburgh Gateways Corporation
Email: devans@pghgateways.org | Phone: 724.825.8309



University of Pittsburgh

Swanson School of Engineering
Department of Electrical and Computer Engineering

1230 Benedum Hall
Pittsburgh, PA 15261
(412) 383-5767
Fax: 412-624-8003
E-mail: maia@pitt.edu

Mar 8, 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

To Whom It May Concern:

This Letter confirms my support and involvement as an assistant professor of Electrical and Computer Engineering at the University of Pittsburgh (Pitt), located in Pittsburgh, PA, in the development of Duquesne Light Company's (DLC's) Grid Visibility Program ("the Project") submitted to the Grid Resilience and Innovation Partnership program (GRIP) (DE-FOA-0002740).

At Pitt, I develop and teach courses on Information Security and Machine Learning among others. My research focuses on leveraging tools of artificial intelligence to create reliable, efficient, and secure cyber-physical systems, with application to power systems. Currently, I am part of a group of professors at the University of Pittsburgh who collaborates with DLC on research. I co-advise PhD student who also works with DLC through internship programs. This collaboration has been of a great value to student's learning as it creates unique opportunities for engaging in real-world problems and practical systems that is reflected in student's research and scholarly publications. I am pleased to support DLC in its application under DOE's GRIP FOA for Topic Area 2. We believe the Project will advance DOE's smart grid objectives by deploying grid enhancing technologies to provide situational awareness from the transmission system to the edge of the distribution grid. Together, these technologies will increase hosting capacity, reduce the need for clean energy curtailment, unlock additional clean energy generation, enable more resilient grid operations, and support energy equity measures for disadvantaged communities.

As part of the Project, our group at University of Pittsburgh will collaborate with DLC in our continued goal to create robust, innovative courses to address the evolving needs of the industry; an example of the study area is leveraging artificial intelligence (AI) to elevate cybersecurity in power systems. It is crucial to address this area to ensure the pipeline of qualified personnel for the pressing need for AI, cybersecurity, and power systems in the region. Furthermore, DLC has committed to the University of Pittsburgh to share data and resources to develop use cases and perform studies.

Please contact me if you have any questions regarding University of Pittsburgh's support and commitment to collaborate with DLC in the creation of new student curriculum and programs.

Sincerely,

A handwritten signature in black ink, reading "Mai Abdelhakim".

Mai Abdelhakim
Assistant Professor
Electrical and Computer Engineering
Swanson School of Engineering
University of Pittsburgh
Email: maia@pitt.edu
Phone: (412) 383-5767



March 13, 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

To Whom It May Concern,

On behalf of SEEL, LLC (Solutions for Energy Efficient Logistics), I am submitting this letter to express my support for Duquesne Light Company (DLC) and their proposed "Grid Visibility Program" ("the Project") submitted under the Grid Resilience and Innovation Partnerships Program (DE-FOA-0002740). SEEL, LLC is a nationally certified minority business enterprise (MBE) service-disabled, veteran-owned (DVBE) energy efficiency program implementation contractor that offers a suite of energy solutions.

The Project uses new and emerging technology, specifically Dynamic Line Ratings (DLR) and Smart Grid Chips (SGC), to enhance the efficiency and operations of the grid, which could have a significant impact on communities located in DLC's service territory. The project seeks to deploy these technologies to enable holistic situational awareness from transmission to the grid's edge to increase capacity, reduce curtailment, enable more resilient grid operations, and support energy equity measures for disadvantaged communities. Grid-enhancing technologies (GETs), such as DLR and SGC, have the potential to move power on the grid more intelligently and accelerate the integration of clean energy sources. We feel DLC's Project is a strong solution towards the grid of the future, while also potentially promoting job creation and economic growth in the region.

SEEL, LLC currently has a partnership with DLC to develop an income eligible outreach plan. Using the results of this collaboration, SEEL will facilitate DLC's outreach to CBOs representing the communities most impacted by the Project. SEEL will engage with the Project as needed to provide input and advice on DLC's community engagement plan. Please contact me if you have any questions regarding SEEL's continuing support of the Project.

Sincerely,

A handwritten signature in black ink, appearing to read "E'Lois Thomas".

E'Lois Thomas, Ph.D
President

ethomas@seelllc.com | 313-294-7414



Workforce Development

OUR GOAL IS YOUR SUCCESS.

**COMMUNITY COLLEGE
OF ALLEGHENY COUNTY**
CCAC West Hills Center
1000 McKee Road
Oakdale, PA 15071
ccac.edu

Tuesday, March 14, 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

To Whom It May Concern:

On behalf of the Community College of Allegheny County, it is my pleasure to write a letter of support for Duquesne Light Company's (DLC's) Grid Visibility Program ("the Project") submitted to the Grid Resilience and Innovation Partnership program (GRIP) (DE-FOA-0002740).

We believe the Project will advance DOE's smart grid objectives by deploying grid enhancing technologies to provide situational awareness from the transmission system to the edge of the distribution grid. Together, these technologies will increase hosting capacity, reduce the need for clean energy curtailment, unlock additional clean energy generation, enable more resilient grid operations, and support energy equity measures for disadvantaged communities.

Community College of Allegheny County looks forward to working with DLC to create workforce development initiatives related to artificial intelligence, machine learning, and cybersecurity to support the implementation of grid modernization technologies like those proposed in the Project.

To conclude, Community College of Allegheny County fully supports the efforts prepared by DLC as they seek funding from the GRIP Program and looks forward to the continued two-way engagement to provide advice and guidance for future workforce development initiatives.

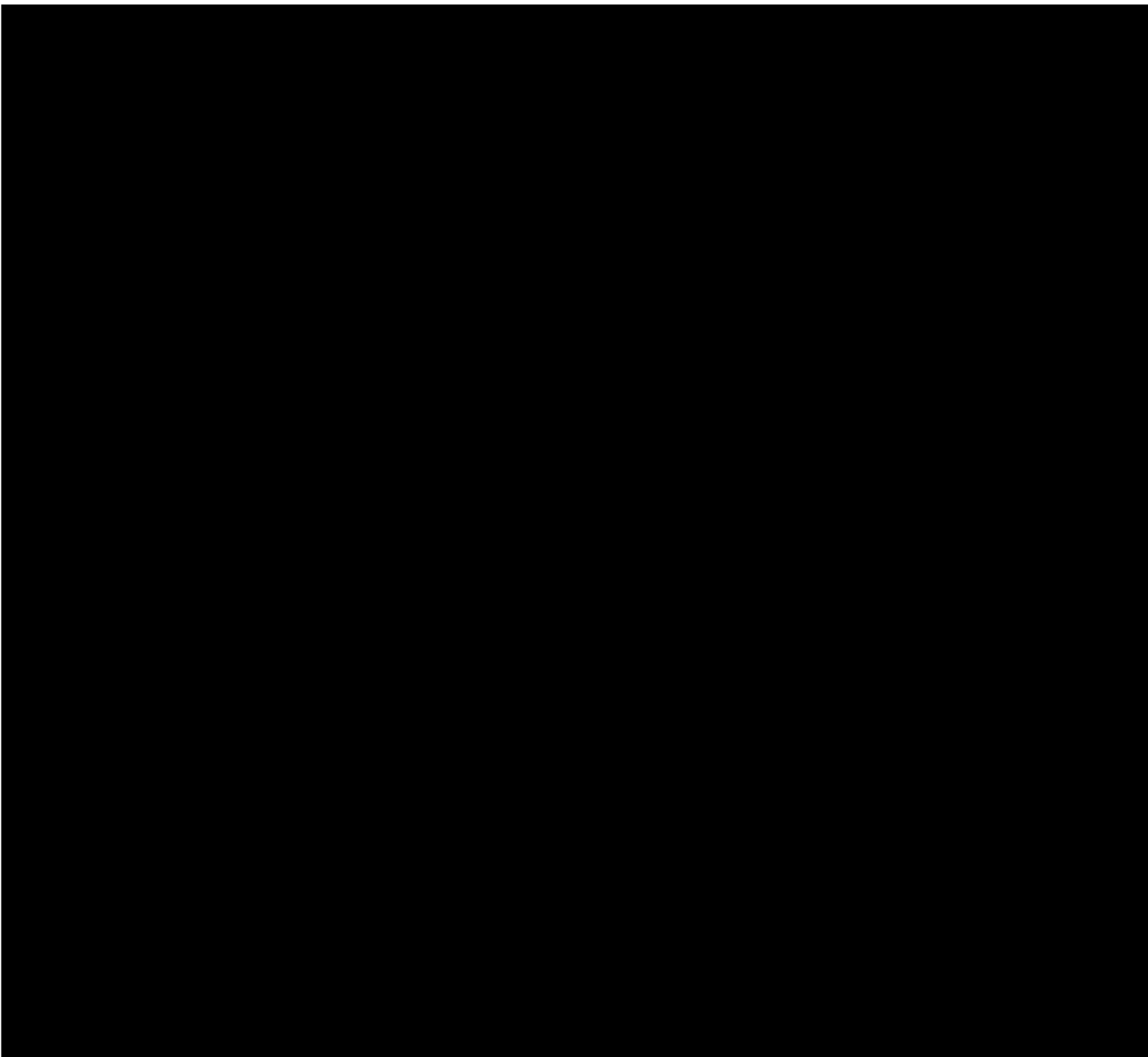
Sincerely,

A handwritten signature in cursive script, appearing to read 'Debra A. Roach'.

Debra Roach, Ph.D.
Vice President for Workforce Development

Community College of Allegheny County
West Hills Center
Email: droach2@ccac.edu
Phone: 412.788.7360

(b) (4)





COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
COMMONWEALTH KEYSTONE BUILDING
400 NORTH STREET
HARRISBURG, PENNSYLVANIA 17120

March 16, 2023

U.S. Department of Energy, Grid Deployment Office
Office of Clean Energy Demonstrations
1000 Independence Ave SW
Washington, DC 20585

Re: Bipartisan Infrastructure Law (BIL) - Grid Resilience and Innovation Partnerships
(GRIP) - DE-FOA-0002740
Duquesne Light Company Proposal

To Whom It May Concern,

On behalf of the Pennsylvania Public Utility Commission ("Commission"), I am writing regarding the "Grid Visibility Project" proposal of Duquesne Light Company ("Duquesne Light"). Duquesne Light is a regulated utility under Commission jurisdiction.

Duquesne Light met with Commission staff in February 2023 to discuss its proposed Grid Visibility Project for which it intends to seek a grant under section 40107 of the Infrastructure Investment and Jobs Act.

In general, the Public Utility Commission is supportive of Pennsylvania utilities pursuing funding towards innovative projects that have the potential to improve service and affordability to Pennsylvania customers.

Sincerely,

/s/ Christian A. McDowell

Christian A. McDowell, Assistant Counsel
Elizabeth H. Barnes, Deputy Chief Counsel
Renardo L. Hicks, Chief Counsel
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120 Tel: (717) 787-5000
Fax: (717) 783-3458

cmcdowell@pa.gov

ebarnes@pa.gov

rehicks@pa.gov

*Counsel for the Pennsylvania Public Utility
Commission*