

# EDPR NA DG Response to Request for Information (RFI) Cuyahoga County Utility & Microgrids

Cuyahoga County Department of Sustainability 2079 East 9<sup>th</sup> Street, 8<sup>th</sup> Floor Cleveland, OH 44115

### July 12, 2022

EDPR NA Distributed Generation LLC 100 Park Ave, 24th Floor, New York, NY 10017

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# **About EDPR NA Distributed Generation**

#### Company Overview & Summary of Services

Full legal name and address: EDPR NA Distributed Generation LLC 100 Park Ave, 24th Floor, New York, NY 10017 Tax ID: 81-3493294 D&B number: 080823415

EDPR NA Distributed Generation ("EDPR NA DG," <u>www.edprnadg.com</u>) is a Houston and New York City based subsidiary of EDP Renewables North America LLC ("EDPR NA," <u>www.edprnorthamerica.com</u>), which develops, constructs, owns, and operates wind farms and solar parks throughout North America. EDPR NA has approximately 800 employees and regional offices in Toronto, Mexico City, Kansas, New York, Oregon, Illinois, and Indiana. EDPR NA's rigorous approach has led to the successful development of more than 7,500 MW of renewable energy facilities, and the company has demonstrated a proven ability to successfully navigate complicated land, interconnection and permitting environments to achieve commercial operations for its projects.

Since 2016, EDPR NA has helped a dozen commercial and industrial customers achieve their financial and sustainability goals through nearly 980 MW of new renewable energy procurement. EDPR NA has worked with a variety of corporate customers on alternative contract structures and as such, we are happy to work on alternative structures to address any risks most salient to your management. EDPR NA's operational assets are spread across 17 U.S. states, one Mexican state and one Canadian province at 53 wind farms and 8 solar parks, making EDPR NA the 4th largest operator of wind energy in the United States.

EDPR NA has a track record of successfully developing projects in the United States for over two decades. EDPR NA's community-focused approach to developing renewable energy projects has led to the successful development of more than 7,500 MW across North America. In addition to its proven ability to successfully navigate complicated land, interconnection and permitting environments, EDPR NA has demonstrated expertise in capturing and monetizing the full amount of tax credits available. EDPR NA is a wholly owned subsidiary of EDP Renováveis ("EDP Renewables" or "EDPR," www.edpr.com), whose majority owner, Energias de Portugal ("EDP," www.edp.com), is a vertically-integrated utility company with a firmly established position in the energy market. Headquartered in Lisbon, Portugal, it is the largest generator, distributor and supplier of electricity in Portugal, the third largest energy company in the Iberian Peninsula, and the largest Portuguese group by market capitalization (over \$11 billion). EDP holds, through its various constituent businesses, significant electricity and gas operations in Europe, Brazil and the United States. Worldwide, EDP has approximately 27 GW of installed electricity generation capacity in Portugal, Spain, France, Belgium, Brazil and the U.S., and 12 million electricity and gas clients. EDP is present in the renewable energy generation business in Europe, the United States and Brazil, and is currently the fourth largest wind power operator worldwide through its 77.5% stake in EDP Renováveis, which has been listed on the NYSE Euronext Lisbon stock market since its initial public offering on June 4, 2008.

EDP Renováveis is a leading global renewable energy company that develops, builds, owns and operates power plants that generate electricity using renewable energy sources. EDPR NA operates in three broad geographic areas: Europe, North America and South America. Specifically, it currently owns and operates wind farms in 14 countries: Belgium, Brazil, Canada, Colombia, France, Greece, Italy, Mexico, Poland, Portugal, Romania, Spain, the United Kingdom, and the United States of America; it has various onshore wind, offshore wind, solar and energy storage projects in varied stages of development and construction in numerous markets, and it is actively engaged in expanding its activities into other countries and technologies.

With more than 11.5 GW of net renewable capacity as of Q3 2020, EDPR is ranked fourth in the world in wind energy based on gross installed capacity and is consistently ranked in the top three in terms of sectorial growth.

#### **Team Members & Relevant Experience**

EDPR NA DG has a combined team experience of more than 100 years in distributed energy, finance, and engineering. EDPR NA DG's management is one of the most experienced in distributed energy operations and leads its employees and subcontractors with a hands-on approach based on integrity, safety, quality, and velocity. Brief background on EDPR NA DG management and key personnel for this project are below.





Richard Dovere Chief Investment Officer

Mr. Dovere serves as Chief Investment Officer of EDPR NA Distributed Generation ("EDPR NA DG"), where he leads capital investment and overall market strategy for the platform's \$500,000,000+ portfolio of operating and development assets. He has more than a decade of experience developing, structuring and financing award-winning renewable power generation projects in the United States and Europe. Prior to EDPR NA DG, Mr. Dovere co-founded and co-led C2 Energy Capital ("C2"), which operated more than \$300 MM of power generation facilities throughout the United States, serving a diverse set of clients including national retailers, utilities, school districts, governmental authorities, colleges and hospitals. He co-led C2's solar and energy storage platform from dining room table to start-up to its successful sale to EDP Renewables North America.

At EDPR NA DG, Mr. Dovere collaborates with numerous industry stakeholders on developing coordinated and innovative solutions for modern electric grid challenges using distributed energy resources. He holds a BA from the University of Wisconsin at Madison.



Candice Michalowicz Chief Operating Officer

Ms. Michalowicz leads EDPR NA Distributed Generation ("EDPR NA DG")'s project development and operations, in addition to engaging key business partners in North America. Prior to EDPR NA DG, she co-founded and co-lead EDPR NA DG Capital ("C2"), building an award-winning solar portfolio of over 300 MW spanning eighteen states. Ms. Michalowicz led efforts that resulted in diversifying C2's customer base to include businesses, municipalities, healthcare and educational institutions as well as capture a growing number of corporate and retail market entries. At EDPR NA DG, she continues to focus on providing a stronger customer-centric approach to the development, construction, and operation of safe and clean distributed generation.

Ms. Michalowicz previously served as Vice President of Development at Healthy Planet Partners where she oversaw the development of the firm's solar photovoltaic projects. She also served as Vice President of Development at Adamas Energy Investments where she led due diligence on over 1 GW of power generation opportunities. She holds a BA Summa Cum Laude from George Washington University.

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Chris Rittenhouse Senior Manager, Head of M&A



David W. Wolfert Jr. Senior Engineering and Safety Manager



Louis Langlois Associate Director, Investment



Michael Howell Associate Director, Asset Management

At EDPR NA DG, Mr. Rittenhouse leads the team's acquisition efforts overseeing successful transactions, a rigorous diligence process, and ensuring sustainable returns for the firm. He has spent seven years in the energy and finance industries, drawing from experiences with oil, natural gas, and both traditional and renewable power generation. Over his career, Chris has managed the electricity and natural gas portfolios of Fortune 500 commercial and industrials, advanced EU market development and growth for Tradition Energy, built proprietary wholesale power and natural gas price analytics, and developed or acquired over \$350 MM of renewable energy assets.

He holds a BSBA concentrating in Finance and Sustainable Economics from Fordham University's Gabelli School of Business.

Mr. Wolfert leads the EDPR NA DG Engineering and Safety team to oversee effective design, engineering, and installation practices contributing to the reliable safety and long-term operation of their DG assets. He has led engineering and construction of 75% of the projects at C2 Energy Capital including the entire Walmart portfolio and was responsible for design and commissioning standards across all assets. Mr. Wolfert's solar career started at Kyocera Solar where he designed and commissioned both off grid and grid tied solar systems including 1kW custom hybrid solar/wind systems, a 60kW solar/wind hybrid off grid system at Fort Bliss for the US Army, and the re-design and commissioning of five critical telecom sites for the United Arab Emirates Army outside of Abu Dhabi. After working at Kyocera Solar, Mr. Wolfert worked at NRG Renew where his highlights included project engineering/construction of the Whole Foods portfolio as well as the Waukegan Schools portfolio in Illinois.

He holds a Master of Science (MS) in electrical engineering from Arizona State University and is NABCEP certified. He also has been awarded numerous patents both pending and issued in the area of semiconductor fabrication techniques and circuit design.

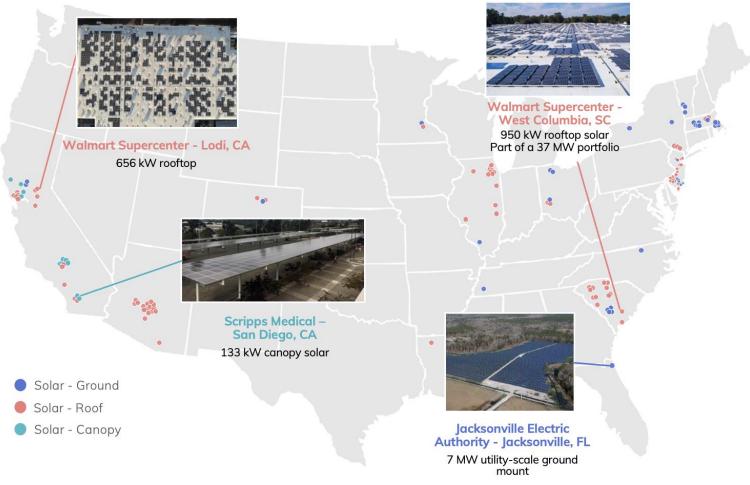
At EDPR NA Distributed Generation "EDPR NA DG", Mr. Langlois serves as an Associate Director of Investments, where he leads business development, capital investment, and strategic initiatives to serve the division's growing pipeline of development and operational assets. He has spent over thirteen years in the energy, real estate, and product development sectors. Over his career, Mr. Langlois has held technical and business leadership positions serving numerous client segments to identify product & market fit and deliver profitable solutions to reduce carbon emissions in the built environment.

He is a systems thinker and an experienced troubleshooter both in the field and in the board room. Prior to joining EDPR NA DG, Mr. Langlois served as the Vice President of Energy Solutions at Carbon Lighthouse, a national energy services company serving real estate investors. During his eight-year tenure, he held management positions leading the deployment of professional services, SaaS, and capital upgrades serving a \$3B+ real estate portfolio of mixed-use facilities. Additionally, Mr. Langlois earned a patent related to intelligent energy monitoring and developed a new product line that increased revenue by 30% for three consecutive years. He holds a BA in Physics from Wesleyan University.

Mr. Howell leads EDPR NA Distributed Generation ("EDPR NA DG")'s Asset Management team overseeing the successful operations of their DG assets. Prior to EDPR NA DG, he led the asset management team for C2 Energy Capital and operated over \$300MM of power generation facilities throughout the United States that comprised of 177MW at 157 plants across 18 states. Over his photovoltaic career that started 32 years ago, Mr. Howell installed systems for 14 years, has trained hundreds of installers, lead the Field operations & Application Engineering teams at GE Energy Solar's division, and developed a solar distribution product division for an electrical distributor.

He holds a BS from the Robert G. Merrick School of Business at the University of Baltimore and has countless hours of photovoltaic industry training.

#### **Development Experience & Existing Footprint**



A map of all EDPR NA DG projects in each state and by mounting type. 39 MW of ground mount and 47.5 MW of rooftop installations comprise a majority of our systems under management.

EDPR NA DG has built a portfolio of 88 MW of distributed energy projects across 20 states. Our framework for success centers around customer alignment, integrity, safety, quality, and velocity and has helped us acquire clients such as Walmart and Scripps Medical. Additionally, we have selected a handful of PV projects that demonstrate EDPR NA DG's ability to successfully install and operate a distributed energy systems throughout the country.

# Cuyahoga County Microgrid - EDPR NA DG's role

EDPR NA DG can fulfill the role of developer of utility customers, distributed generation projects, and/or microgrids for the County. EDPR NA DG can provide financing, long-term ownership, and operations & maintenance for the distributed generation and/or microgrid assets. EDPR NA DG Is able to develop DG & microgrid projects for both individual customers or the County Utility to be off-takers. EDPR NA DG can provide the capital and Insurance for these projects.

#### Financing & Ownership

EDPR NA DG partners with leading financial institutions in the energy sector to secure funding for our projects, giving our clients a faster, flexible project timeline and an ability to make quick decisions. We have an impressive track record for financing distributed energy systems similar in size and scope. We will secure and manage all financing and related paperwork, freeing the County from the complexities and bureaucracy of distributed energy financing. With EDPR NA DG managing the financing of the project, we will retain ownership of the PV system and associated equipment warranties. Because our project approach emphasizes customer alignment, we work closely with our clients to ensure that the project is well-planned, from financing down to construction and system operations.

EDPR NA DG also finances development, permitting and construction with equity, both self-generated or provided by its parent company, EDP Renováveis, S.A. (a Spanish sociedade anónima). EDPR NA DG also utilizes tax equity financing with closings occurring on or around Project's commercial operation date.

EDPR NA has successfully entered tax equity partnerships with large financial institutions, raising approximately \$5 billion since 2007. In addition to tax equity, EDPR NA may also consider selling a cash equity stake to institutional equity investors at or after commercial operation date. As of YE 2019, EDPR NA's parent company, EDPR SA, owned \$20.3 billion in total assets, \$9.5 billion in total equity, and \$666 million in cash and cash equivalents (each such amount converted from Euros at 1.145 USD/Euro).

EDPR NA has no material project-level debt in its portfolio, being financed mainly through the previously described sources, and has never filed for bankruptcy protection. EDPR NA's ultimate parent company, EDP S.A., is a rated entity, with current long-term credit ratings of BBB- with a stable outlook (S&P), Baa3 with a stable outlook (Moody's), and BBB- with a stable outlook (Fitch). EDP's Financial Reports may be found at <a href="https://www.edp.com/en/investors/investor-information/reports-and-accounts">https://www.edp.com/en/investors/investor-information/reports-and-accounts</a>. EDP Renewables' Financial Reports may be found at <a href="https://www.edp.com/en/investors/

#### **Operations & Maintenance**

As the owner and operator of renewable energy systems, EDPR NA DG can provide the operations and maintenance. EDPR NA DG manages operations for more than 88 MW in 20 states. As long-term owners and operators, we are continuously evaluating industry best practices in design and maintenance. We are an employee-owned company with a long-term perspective. We take pride in facilitating projects that are steeped in safety, quality, and alignment. These core values guide every decision and every deal we make. If we develop a project, we also operate it for the life of the contract – no 'flipping'!

EDPR NA DG closely monitors the systems under our management with Supervisory Control and Data Acquisition (SCADA). We use AlsoEnergy to verify system performance. Monthly production numbers show in the invoices, and we can provide clients with more detailed quarterly production reports, upon request. We also provide our clients the option to access real-time production data with the AlsoEnergy system.

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Our O&M focuses on optimizing system production, extending system life, and ensuring safe operations of the system. This is accomplished through core O&M services: Preventive, Corrective, and Condition-Based maintenance.

- **Preventive Maintenance.** Performed at least once a year to reduce the likelihood of system failure. This is comprised of routine inspections of all equipment, equipment servicing, and cleaning. These include, among other things, thermal imaging, IV curve testing, and inverter air filter cleaning to ensure system safety and reliability.
- Corrective Maintenance. This is done on an as-needed basis, i.e., when a part or equipment is broken. The speed of response is dependent on the severity of damage and its associated safety and performance risks. If an entire site trips offline, we send an O&M crew ASAP.
- **Condition-Based Maintenance.** Data is used to determine maintenance in this type of service. We use system data to identify underperforming parts, to anticipate system failure, speed repairs, and prioritize maintenance.

We also employ continuous improvement in our O&M processes to ensure we provide safe systems and the best service to our clients. We use feedback loops, monitor industry standards, and consistently gather data on key performance indicators (KPI) across our portfolio. These KPIs include performance ratios, equipment uptime, energy losses, and actual vs. expected vs. planned output, among others.

Michael Howell, our Director for Asset Management, leads our O&M team. He will be the County's direct contact for all O&M matters. We aim to respond and have service personnel on-site within 24 hours from when we receive a report. With active monitoring of the systems under our management, our clients need to worry less about reporting system downtime to EDPR NA DG.

#### Customer Recruitment & Business Development - Ali Ahmed

Additionally, Ali Ahmed would support EDPR NA DG's project developer role In taking the lead on County Utility customer recruitment. Ali is the Founder and Principal at Green Strategies LLC and Is a recognized sustainability and energy management leader who has developed and managed more than 50 global energy and sustainability programs. With over 25 years of experience, he combines an uncommon level of technical depth, combined with an understanding of business operations to create value-added, high-ROI energy and sustainability programs. His areas of expertise energy management, energy procurement, renewable energy, carbon management and reporting, building and industrial automation, and sustainable transportation solutions. Ali is a Certified Energy Manager and Auditor from the Association of Energy Engineers and a LEED Accredited Professional from the US Green Building Council. Ali would bring his In-depth local knowledge and expertise to aid EDPR NA DG's project team In successful customer base development.

# **Additional Questions**

- What's the typical timeline/cycle for the respondents proposed role(s)? (e.g. it takes X year(s) to find customers for a microgrid and build it)
  - We estimate approximately 18 months from a signed contract to project complete for DG solar project development. This does not Include a customer acquisition period.
- Would the respondent meet with the County and / or its representatives to present ideas and to answer follow up questions?
  - Yes, our team would be happy to meet with the County and/or Its representatives to present Ideas and answer follow up questions.
- All respondents will be placed on a list for other respondents to consider for teaming and/or subcontracting. If your entity requires exclusion from this list, please state so.
  - We do not require exclusion from this list.



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### JEA Jacksonville – Jacksonville, FL 7 MW

This 7 MW ground-mounted utility solar array in Jacksonville, FL supplies power to the local electrical distribution grid. Producing an estimated 10 million kilowatt-hours of carbon-free electricity annually, this project is expected to offset over 7,296 metric tons of CO2 emissions – equivalent to the annual energy consumption of 1,272 American households.





Offsets 7,296 metric tons of CO2 emissions per year



Equivalent to **1,272** American household's annual energy needs



#### MA – Lakeville – Lakeville, MA 3.3 MW

This ground-mount solar installation is located in Lakeville, MA. Sized at approximately 3.3 megawatts, this system is estimated to produce 4.15 million kilowatt-hours of carbon-free electricity annually. This project is expected to offset more than 2,937 metric tons of CO2 emissions – equivalent to the annual energy needs of 339 American households.



Producing

4.15m

Kilowatt-hours of carbon-free electricity annually

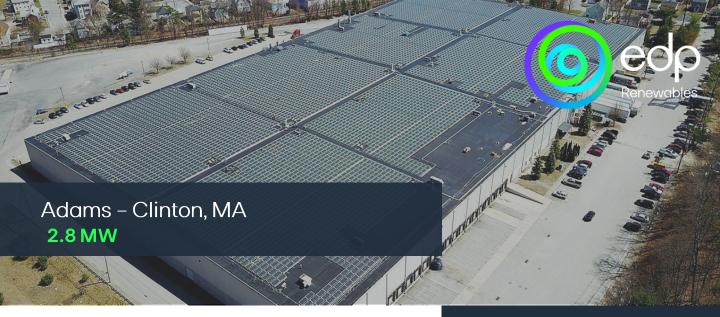


Offsets **2,937** 

metric tons of CO2 emissions per year



American household's annual energy needs



This project is a rooftop solar array in Clinton, MA. Sized at 2.8 megawatts, the system offsets the electrical consumption of this community. Producing an estimated is 2.8 million kilowatthours of carbon-free electricity annually, this project is estimated to offset over 1,984 metric tons of CO2 emissions – equivalent to the annual energy needs of 346 American households.



Producing

#### 2.8m

Kilowatt-hours of carbon-free electricity annually



Offsets

1,984

metric tons of CO2 emissions per year



Equivalent to **346** American household's annual energy needs



This ground-mounted array in Swansea, MA is sized at 2.1 megawatts, which offsets electricity bv several public consumption housing complexes owned by local municipal housing authorities. Producing an estimated 2.7 million kilowatt-hours of carbon-free electricitv annually, this project is expected to offset more than 1.969 metric tons of CO2 emissions equivalent to the annual energy needs of 343 American households.



Producing **2.7m** Kilowatt-hours of carbon-free electricity annually



Offsets **1,969** metric tons of CO2 emissions per year



343 American household's annual energy needs



This solar parking canopy and rooftop solar array are onsite at a Scripps Health campus in San Diego, CA. Sized at 1 megawatt, the system offsets consumption at two Scripps facilities on the campus. Producing an estimated 1.5 million kilowatt-hours of carbon-free electricity annually, this project is expected to offset over 1,092 metric tons of CO2 emissions per year – equivalent to the annual energy needs for 190 American households. Producing Producing **1.5m** Kilowatt-hours of carbon-free electricity annually Offsets **1,092** metric tons of CO2 emissions per year Equivalent to

. **192** American household's annual energy needs



### Walmart Supercenter #2768 – Mesa, AZ 1.0 MW

This solar parking canopy and rooftop solar array are onsite at a Scripps Health campus in San Diego, CA. Sized at 1 megawatt, the system offsets consumption at two Scripps facilities on the campus. Producing an estimated 1.5 million kilowatt-hours of carbon-free electricity annually, this project is expected to offset over 1,092 metric tons of CO2 emissions per year – equivalent to the annual energy needs for 190 American households.





### Kelly Way – Holyoke, MA 0.65 MW

This project is a ground-mounted solar array in Holyoke, MA. Sized at 0.65 megawatts, the system offsets the electrical consumption of this location. Producing an estimated 812,010 kilowatt-hours of carbon-free electricity, the project is estimated to offset over 574 metric tons of CO2 emissions – equivalent to the annual energy consumption of 100 American households.





This canopy solar installation is located in Absecon, NJ, and is sized at approximately 464 kilowatts.



#### 7th Day Church – Andover, NJ 0.37 MW

This rooftop and canopy solar install is located atop of the headquarters of the Conference of the Seventh-day Adventist Church. The headquarters, which is one of five systems for the Seventh-day Church, is equipped with nearly 1,000 solar modules and a total capacity of 366.39 kilowatts, the solar power system offsets nearly all of the electrical load in the facility. Producing approximately 411,000 carbon-free kilowatt-hours electricity of annually, the project is estimated to offset over 291 metric tons of CO2 emissions equivalent to the annual energy consumption of 34 American households.



Producing

411k

Kilowatt-hours of carbon-free electricity annually



Offsets

291 metric tons of CO2

emissions per year



American household's annual energy needs



Infant Jesus Church & School – Woodbury Heights, NJ 0.37 MW

This rooftop solar installation sits atop a church and school located in Woodbury Heights, NJ. Sized at approximately 251 kilowatts, this system is estimated to produce 311 thousand kilowatthours of carbon-free electricity annually. This project is expected to offset more than 220 metric tons of CO2 emissions – equivalent to the annual energy needs of 25 American households.



Producing

311k

Kilowatt-hours of carbon-free electricity annually



Offsets

220 metric tons of CO2 emissions per year



American household's annual energy needs



### Walmart Supercenter #5867 – Bayonne, NJ 0.2 MW

This rooftop solar installation sits atop a church and school located in Woodbury Heights, NJ. Sized at approximately 251 kilowatts, this system is estimated to produce 311 thousand kilowatthours of carbon-free electricity annually. This project is expected to offset more than 220 metric tons of CO2 emissions – equivalent to the annual energy needs of 25 American households.







**220** 

metric tons of CO2 emissions per year



Equivalent to the amount of carbon

270 acres of forest would sequester per year



Our Lady of Guadalupe Church – Stratford, NJ 0.19 MW

This multi-rooftop solar installation sits atop a church located in Moorestown, NJ, and is sized at approximately 185 kilowatts.



This rooftop solar installation is located in Nanuet, NY. Sized at approximately 193 kilowatts, this system is estimated to produce 230 thousand kilowatt-hours of carbon-free electricity annually. This project is expected to offset more than 163 metric tons of CO2 emissions - equivalent to the annual energy needs of 19 American households.



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Ohio Public Schools Portfolio Village of Tontogany, New Lebanon & Blanchester OH 1.1 MW

Located on school rooftops and far behind sports fields, these solar systems provide clean and affordable energy to three public school districts across eastern Ohio-those of Otsego, New Lebanon, and Blanchester. This portfolio is a true public-private partnership, powering elementary, middle, and high schools using Ohio's municipal utility networks, and providing significant savings on the schools' electricity bills. These school districts now have more resources to devote to education: not just through finances, but through green workforce opportunities, too, with a handful of stellar high school alumni learning first-hand how to help install solar arrays. It is no wonder the Blanchester mayor granted his stamp of approval. Locations:

- Village of Tontogany, OH: Otsego Elementary, Middle, and High School
- New Lebanon, OH: Dixie Elementary and High School
- Blanchester, OH: Putnam Elementary School, Blanchester Middle and High School

Client Contact: Adam Koch akoch@otsegoknights.org Producing **2.6m** Kilowatt-hours of carbon-free electricity annually



metric tons of CO2 emissions per year



Equivalent to **224** American household's annual energy needs



# City of Westbrook – Westbrook, ME 7 MW

EDPR NA DG participated in a competitive solicitation for the City of Westbrook. The City had a goal of procuring 100% clean energy through the Net Energy Billing program regulated by the Public Utilities Commission in the state of Maine. The City of Westbrook was an early adopter of the NEB program and provided bidders with an array of potential sites available for onsite solar. In addition to meeting its renewable energy goals, the City emphasized its desire to take its investment in onsite solar a step further by integrating the solar PV arrays into the learning of every student in the City's public schools.

EDPR NA DG put together a team of Maine experts who had experience working in the state and with the Net Energy Billing program. EDPR NA DG evaluated over 10 sites and proposed initial designs that would meet the City's energy needs through a cost effective, long-term Power Purchase Agreement. Although EDPR NA DG did not opt to install solar on the City's schools, it demonstrated its commitment to educating Westbrooks's students on the proposed array through providing a multitude of educational opportunities.

Producing 7.6m Kilowatt-hours of carbon-free electricity annually Offsets 5,386 metric tons of CO2 emissions per year Equivalent to 649 American household's annual energy needs

Walmart Supercenter #1549 -Phoenix, AZ 1MW

This rooftop installation is crowning the Walmart in Phoenix, Arizona. The over 1 MW system is producing about 1.6 million kilowatt-hours of electricity annually and further offsetting its carbon footprint by approximately 1,142 metric tons annually -equivalent to the amount of carbon 1,400 acres of forest would sequester per year. The Walmart Supercenter #1549 Phoenix Solar Project is part of eighteen rooftop solar projects, totaling almost 15 MW , on Walmart stores in Arizona alone. Many more solar projects have been completed by EDPR NA DG for Walmart stores across the country.

#### **Client Contact: Available upon request**

Producing **1.6m** Kilowatt-hours of carbon-free electricity annually Offsets **1,142** metric tons of CO2 emissions per year

wable

Equivalent to **1,400** American household's annual energy needs



# Walmart Portfolio – South Carolina **5.9 MW**

# Walmart 3

EDPR NA DG currently owns and operates 5.9MW of solar across 8 sites in South Carolina (SC). After the successful installation of the 5.9 MW SC portfolio, Walmart awarded EDPR NA DG another 50 MW of installations in NJ, AZ, CA, IL, LA. among other states. The Columbia Two Notch Supercenter, featured above, is one of EDPR NA DG's largest installations for Walmart in South Carolina.

This 992 kilowatt rooftop system, completed in December of 2018. produces about 1.6 million kilowatt-hours of electricity each year. The installation offsets Walmart's footprint by approximately 1,142 metric tons annually – equivalent to the amount of carbon 1.400 acres of forest would sequester per year. The Walmart Columbia Two Notch Solar Project is part of eight rooftop solar projects, totaling just over 5.870kW. on Walmart stores in South Carolina alone.

EDPR NA DG has committed to working with Walmart to provide safe, cost-effective, reliable, and on-time successful delivery of solar installations in SC and beyond.

Contract Signed: Mar 2018 Operation Date: Dec 2018 Client Contact: Available upon request Producing **B.8m** Kilowatt-hours of carbon-free electricity annually Offsets **6,212** metric tons of CO2 emissions per year Equivalent to **7,611** 

American household's annual energy needs



Walmart Columbia Two Notch #1339 – Columbia, SC 1MW

### Walmart 💦

Completed in December 2018, this rooftop installation is crowing the Walmart in Columbia, South Carolina. The 992-kilowatt system is producing about 1.6 million killowatt-hours of electricity annually and further offsetting its carbon footprint by approximately 1.142 metric tons annually – equivalent to the amount of carbon 1.400 acres of forest would sequester per year. The Walmart Columbia Two Notch Solar Project is part of thirteen rooftop solar projects, totaling just over 9,700 kW, on Walmart stores in South Carolina alone. Many more solar projects have been completed by EDPR NA DG for Walmart stores across the country.

Contract Signed: Mar 2018 Operation Date: Dec 2018 Client Contact: Available upon request Producing Producing **1.6m** Kilowatt-hours of carbon-free electricity annually Offsets **1,14.2** metric tons of CO2 emissions per year Equivalent to

**1,400** American household's <u>annu</u>al energy needs



#### Walmart Easton #1715 – Easton, MD 540 kW

Completed in December 2018. this rooftop installation is crowning the Walmart in Easton, Maryland. The 542-kilowatt system is producing about 0.7 million kilowatt-hours of electricity annually and further offsetting its carbon footprint by approximately 497 metric tons each year. This is equivalent to the amount of carbon 60 American households would use in a year. The Walmart Easton Solar Project is just one of 51 projects that EDPR NA DG has signed with Walmart, totaling to over 38 MW across seven states.

EDPR NA DG is committed to working with Walmart to provide safe. cost-effective, reliable, and on-time successful delivery of solar installations in Maryland and beyond. Producing **D.7m** Kilowatt-hours of carbon-free electricity annually Offsets **497** metric tons of CO2 emissions per year





Formed by the merger of industry leaders Exal Corporation and Ardagh's Global Food & Specialty business. Trivium Packaging offers customers around the world innovative and sustainable packaging solutions. They approached EDPR NA DG to assist in reducing energy costs and demonstrating corporate sustainability leadership with their Nevada manufacturing facility. Through Trivium's Operational Excellence program and environmental management systems, the company continuous drives efficiency improvements across its facilities. After closely monitoring energy consumption and emissions at their Sparks, Nevada facility, they wanted to explore how to be more energy efficient, incorporate solar into their energy mix, optimize rooftop, parking lot and adjacent land real estate and demonstrate environmental stewardship.

EDPR NA DG is bringing together its western regional team to custom tailor solar solutions that architecturally fit with the esthetic of the existing facility, reduce onsite energy operating costs, and contribute to GHG and carbon offset environmental targets laid out by Trivium Packaging. Having been awarded the project in June of 2021, additional efforts are also being explored to include a pollinator friendly ground-mount array, as well as potentially utilize the facility to educate local STEM related school children and community stakeholders on the benefits of businesses going green. Producing **8.3m** Kilowatt-hours of carbon-free electricity annually



Offsets **5,868** metric tons of CO2 emissions per year





### Hopkins High School – Minnetonka, MN 1.3 MW

This project is a rooftop solar array in Minnetonka, Minnesota. Sized at 1.3 megawatts, the system offsets the electrical consumption of the high school. Producing an estimated is 1.5 million kilowatt-hours of carbon-free electricity annually, this project is estimated to offset over 1,089 metric tons of CO2 emissions – equivalent to the annual energy needs of 131 American households.

Client Contact: Available upon request

Producing **1.5m** Kilowatt-hours of carbon-free electricity annually Offsets **1,089** metric tons of CO2 emissions per year

Equivalent to **131** American household's annual energy needs



This community solar project consists of two ground-mount systems on the Wheaton College campus in Massachusetts. This 1.3 MW system the option for the school and provides surrounding entities within the community to subscribe to clean energy at a discounted rate. Wheaton College owned a parcel on Clapp Street that was not being used, and this was an ideal opportunity for them to be forward-thinking and start conversations about developing a solar field. As a community solar project, local entities are able to subscribe to the remote net metering program. In other words, they receive bill credits to offset their electricity usage with the energy generated from this solar project. This project saved 16.500 MWh in annual electricity production, equivalent to over \$12.000 in total estimated annual bill savings



Producing

16.5m

Kilowatt-hours of carbon-free electricity annually



Offsets **11,693** metric tons of CO2 emissions per year



Equivalent to **1,408** American household's <u>annual energy</u> needs



# Cortland Virgil – Cortland, NY 2.67 MW

This 2.73 MW ground-mounted solar array in Upstate New York is in the National Grid service area and supplies power to the local electrical distribution grid. Producing an estimated 3.5 million kilowatt-hours of carbon free electricity annually, this project is expected to offset over 2.453 metric tons of CO2 emissions -equivalent to the annual energy consumption of 295 American households. This project began operating in February of 2021.

A copy of Cortland Virgil's Phase I Environmental Assessment is attached in Appendix A for the OGS's reference.

Contract Signed: June 2020 Operation Date: February 2021 Client Contact: Available upon request CD

Producing

#### 3.5m

Kilowatt-hours of carbon-free electricity annually



Offsets 2,453 metric tons of CO2

emissions per year



295 American household's annual energy needs



# McLean 2 – Cortland, NY 2.71 MW

This ground-mount solar installation is located in Cortland, NY within National Grid's service territory. Sized at approximately 2.71 megawatts, this system is estimated to produce 3.3 million kilowatt-hours of carbon-free electricity annually. This project is expected to offset more than 2,342 metric tons of carbon dioxide emissions – equivalent to the annual energy needs of 282 American households.

Contract Signed: June 2020 Operation Date: February 2021 Client Contact: Available upon request



Producing

#### 3.3m

Kilowatt-hours of carbon-free electricity annually



Offsets

2,342 metric tons of CO2 emissions per year



Equivalent to **282** American household's annual energy needs



#### Strawberry Solar Farm – Chelmsford, MA 1MW

Strawberry Solar Farm is a 1MW-ac solar project in Chelmsford, MA that consists of solar and onsite storage. The BESS used has an energy storage capacity rating of 1134 kWhrs and includes site controls, remote monitoring access and a well water injection system for the purposes of mitigating against battery thermal runaway conditions. The BESS is inspected and certified according to UL 9540, the Standard for Energy Storage Systems and Equipment. The site controller system, based upon a PLC platform, provides centralized control of the BESS between the application control requirements and all other equipment. This project is under development and is set to be commercially operational by June 2021.

#### Client Contact: Available upon request



Producing

#### 1.33m

Kilowatt-hours of carbon-free electricity annually



Offsets

938

metric tons of CO2 emissions per year



American household's <u>annu</u>al energy needs



This 1.2 MW ground-mounted solar array in Upstate New York is in the Consolidated Edison service area and supplies power to the local electrical distribution grid. Producing an estimated 1.6 million kilowatt-hours of carbon free electricity annually, this project is expected to offset over 1,118 metric tons of CO2 emissions -equivalent to the annual energy consumption of 135 American households. This project began operations in summer of 2021.

#### **Client Contact: Available upon request**



Producing

#### 1.6m

Kilowatt-hours of carbon-free electricity annually



Offsets **1,118** metric tons of CO2 emissions per year

