



NYPA Assistance for Municipalities

Solar, Storage, LED Street Lighting, EV, and more!

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Our Mission

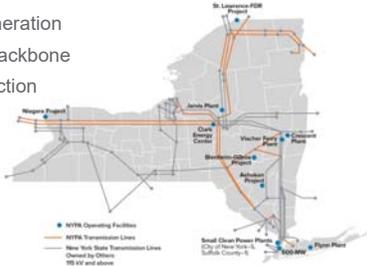
Power the economic growth and competitiveness of New York State by providing customers with low-cost, clean, reliable power and the innovative energy infrastructure and services they value.



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Quick Facts

- 20% of NY's electricity generation
- 1/3 of NY's transmission backbone
- \$300M+ in annual construction investments for customer sited solutions
- No taxpayer support
- Local government, state agencies, C&I, nonprofit hospitals and universities



Source: New York State DPS REV website



Why Cities and Villages can work with NYPA

Public Authority's Law (PAL) 1005 (17) authorizes NYPA to finance and design, develop, construct, implement, provide and administer energy-related projects, programs and services for:

- Any public entity
- Any not-for-profit institute of higher education within NYS
- Any public or nonpublic elementary or secondary school
- Any recipient of NYPA's economic development power programs
- Any municipal distribution agency power

NY Power Authority



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How can NYPA help you?

TRUSTED ENERGY ADVISOR	INFRASTRUCTURE UPGRADES	SITE PERFORMANCE INSIGHT & ANALYSIS	PROSUMERS (EFFECTIVE DEMAND SIDE MGMT)	
ACHIEVE ENERGY POLICY GOALS	RESILIENCY	ENERGY & COST SAVINGS	O&M SERVICES	INNOVATIVE ENGINEERING EXPERTISE
ENERGY EFFICIENCY	IMPROVED WORK & LEARNING ENVIRONMENTS	INNOVATIVE FINANCING OPTIONS	QUICK PROCUREMENT	DEPENDABILITY



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Clean Energy Advisory Services

NYPA has prequalified numerous vendors who are industry leaders in DER technologies:

- Solar PV
- Wind
- RE-coupled and stand-alone energy storage
- Smart inverters, microgrids, advanced load control

Over 75 megawatts currently under development



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NYPA manages DER projects from inception to completion

- Acting as trusted energy advisor and subject-matter consultants
- Advisory Services are delivered through a phased approach:

Phase 1:
Site Analysis and Project Pre-development

Phase 2:
Development of RFP

Phase 3:
Bidding Process and Evaluation

Phase 4:
Project Implementation Management



Why NYPA?

- **Expedited Procurement**
NYPA has developed PPA agreements acceptable to both municipal/State customers and financiers, minimizing the time to execute an agreement.
- **Reduction of Soft Costs**
By performing significant due diligence prior to issuing a procurement, NYPA's Advisory Team reduces development costs, resulting in up to 30% lower contract rates than could be otherwise achieved.
- **Experienced Advisor**
Through our extensive experience, NYPA has identified the key pitfalls in the development process and leverage lessons-learned to maximize overall project value.
- **Aggregated Pricing**
By bundling multiple sites in our bids, NYPA is able to receive lower portfolio rates than could be realized through a single-site agreement.



Smart Street Lighting NY

- Governor announced NYPA to implement Smart Street Lighting NY Program in January 2018
- Goal of 500,000 street light conversions to LED by 2025
- \$87 million savings annually to NYS taxpayers
- Reduced energy consumption equal to 44,770 NYS households
- Improved quality of light and safety for communities across the state



Street Lighting Facts & Figures

- ~300M street lights worldwide
- ~1.5M street lights in New York State
- Public lighting is more than 20 years old
- Lighting can account for up to 40% of a city's total energy consumption



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Why is Street Light Ownership Important?

- Largest municipal utility cost
- Significant savings opportunity: cost, energy, GHG
- Improve light levels to increase health and safety
- Utilize infrastructure for enhanced community services



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Municipal Street Light Ownership

- Local Law 70-a has now open the door for municipalities to purchase street light from local utility which results in significant savings
- Outside of Westchester County and Long Island, street lighting system ownership is a new concept.
- Municipalities currently lack the resources and expertise to manage and maintain street lighting assets.



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NYPA's Smart Street Lighting Program

1. Purchase and conversion of LED street light
2. Smart city solutions
3. Street light O&M



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Purchase & Conversion of Street Lighting System

ACQUISITION

- Owner's representative
- Assist with paperwork submission
- Review documents
- Experienced with process of all 5 major utility in NYS
- Compare various streetlight ownership models



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Purchase & Conversion of Street Lighting System

DESIGN

- Street lighting infrastructure assessment
- Sample photo metrics analysis
- Recommend fixture replacement
 - Color temperature, lumen, beam spread
- Secure grants/ rebates/ incentives
- Procure materials and labor
- Review Smart City Solutions
- Community Engagement



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Purchase & Conversion of Street Lighting System

CONSTRUCTION

- One point of contact
- Manage contractors
- Oversee logistics and timeline
- Quality control
- Conversion report to utility
- Commissioning



Purchase & Conversion of Street Lighting System

PROJECT FINANCING



- NYPA offers competitive financing, including financing during construction. NYPA will finance all up-front development and project milestone costs.
- No repayment to NYPA until project is 100% complete



Purchase & Conversion of Street Lighting System

Aggregations

PROCUREMENT

- Issued material bid 300,000 street lights
- Reduced material cost by ~ 30%
- Streamlines project development
- Flexible contract: can incorporate new fixtures at preferred pricing

PROJECTS

- Combine multiple municipalities by region with less than 500 lights
- Economy of scale for install labor & maintenance
- Reduces development cost by organizing joint meetings



Smart City Solutions

- Enhanced services for residents, businesses, employees, and visitors
- Improved customer experience and quality of life
- Enhances the effectiveness and efficiency of municipal operations



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Smart City Solutions: Sample Technology

CONNECTIVITY

- Reduce the digital divide
- Added 4G/5G density
- Revenue generation
- Public Wi-Fi access





ENVIRONMENTAL

- Outdoor air quality monitoring
- Ice / snow detection
- Weather




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Smart City Solutions: Sample Technology

TRANSPORTATION

- Public transportation benefits
- Optimization / monitoring
- Parking management
- Connected vehicles





PUBLIC SAFETY

- Video analytics
- Noise / motion monitoring




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Street Lighting O&M

Assist with long-term solution of operations and maintenance of street light system

- Support municipality through the selection process of a 3rd party O&M contractor

Peace of mind

- Remove O&M uncertainty by developing detailed scope of work with municipality

On-going street light advisor

- Provide support for various aspects of the street light system



**Evaluating NYP&A direct O&M service offering*




Purchasing Street Lights – Case 70-A

- Municipality may submit formal request *once* for every *12-month period*
- Utility company has up to *90 days* to provide proposed purchase price to municipality. *
- Municipality has up to *180 days* from the receipt of the purchase price proposal to review and respond to utility their intent to negotiate or move forward with the purchase.



Purchasing Street Lights

- Once a purchase price is agreed to, the utility has up to *60 days* to file the final sale price for the Public Service Commission approval.
- Upon the Public Service Commission’s approval, the municipality and utility may move forward with the streetlight sale

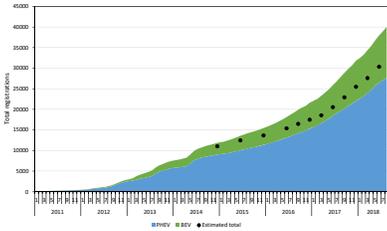


Register for more information:

<https://www.nypa.gov/services/customer-energy-solutions/led-streetlight>



Growth of Registered Electric Vehicles in NY



Charge NY 2.0

Initiative to accelerate the growth of the electric vehicle market in New York State.

- Collaboration between NYPA, NYSEDA, and NYS DEC
- Goal of reaching 10,000 charging stations by 2021
- Charge NY 1.0 was launched in 2013 with goal of 3,000 charging stations across NY by 2018.
 - Currently over 2,500+ charging stations installed, close to meeting 2018 goal.



NYPA's Electric Transportation (ET) Program (present)

- NYPA managed EVSE deployments
- 300 L2 EVSE
 - Municipal sites: NYSEDA and DEC grants cover up to \$4k and \$8k respectively
 - Workplace sites: NYSEDA grant covers hardware/software costs
- 23 DCFC (150 kW) with Thruway – NYC to Buffalo
 - Project also includes multiple L2 commuter lots
- Airport GSE 400 DCFC ports with L2 EVSE at JFK



EVolve NY

- NYPA allocated \$250 million through 2025 to address key infrastructure and market gaps to accelerate the adoption of EVs.
- \$40 million committed for 1st phase through end of 2019.
 - 200 DC Fast Chargers that will be NYPA owned
 - Airport Fast Chargers at JFK
 - EV Model Communities: targets our municipal utilities, will look at new business models and smart charging technologies



NYSERDA Incentive Programs

Drive Clean Rebate and Outreach Initiative

- \$70M total towards the growth of the EV Market.
- \$15M will support improving consumer awareness of electric cars, installing more EV infrastructure, and other efforts to put more EVs on the road.
- \$55M dedicate to point-of-sale rebates up to \$2,000 towards the purchase of a PHEV or a BEV
 - Open to all New York State residents and government entities
 - NYSERDA rebate is stackable with other grant programs

Charge Ready NY

- Open to both public and private organizations to install Level 2 EV charging stations
- At public parking facilities, workplaces, and multifamily apartment buildings
- Rebates of up to \$4,000 per charging port installed.



DEC Rebate Program - Charging Stations

- Third window of funding will be announced in Fall 2018
- Must be accessible to the general public
- Covers 80% to 100% percent of costs
 - Full install or self-install (labor counts as cost share)
- Cap per facility: \$250,000
- Cap per municipality: \$625,000
- Must be networked EVSE
- Can be level 2 or level 3 EVSE
- Rebate caps per port:
 - Level 2: \$8,000
 - Level 3: \$32,000

