

# Middleton and MGE Solar 2016 Projects

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# Two Projects

- 500 kW community solar “Shared Solar Program” offered by MGE to MGE customers

1728 panels, enough power for 100+ homes

Hosted by Middleton on rooftop of city Municipal Operations Center (82,000 square foot roof)

- 104 kW solar installation on Middleton Police Department

Projected to provide 25% of city’s electricity needs for the building





# Background- Middleton

- 2009 Common Council resolution: 25 by 25
- 2010 City adopted sustainability plan covering solid waste, water, transportation, energy, land use, economy, public/outreach and education
- 2010 City signed on to Green Tier Legacy Communities Charter
- Construction of new Municipal Operations Center (2014-2015) and Police Department anticipated rooftop solar

# Background- MGE

- MGE Energy 2030 framework

Goal: Supply 30 % of MGE's electric sales with renewable resources by 2030

Reduce carbon dioxide emissions 40% from 2005 levels by 2030

- Customer interest in access to solar power and other renewables

# Timeline

- Early 2015: MGE presentation to Middleton Common Council for joint solar projects
  - Common Council authorizes negotiations
- January 2016: initial review by Public Service Commission in January, 2016
- March 2016: PSC approves community solar project
- May 2016: Middleton Common Council final approval
- July 2016: contracts finalized July, 2016
- Early 2017: solar installations complete and operational

# City negotiating team

- Director of Community Development (within planning and zoning department)
- Finance Director
- City Administrator
- Legal Counsel

# Community Solar

- MGE offers residential customers (Rg-1's):
  - one time participation fee of \$47.25 per quarter-kW block; average one time payment \$340 per customer for 1.8 kW of power
  - customer pays \$0.12 per kWh fixed rate for solar energy for 25 years, and reduced transmission charge of \$0.008/kWh
  - take shared solar with if moving within MGE service area
  - exit anytime
  - customer receives bill showing regular electricity charges along with charge for solar power
- MGE and City worked together on promotion
  - offered to all MGE customers
  - additional outreach to Middleton residents (newspaper, web, emails)

# Lease for community solar

- City's role: provide roof space to host solar array at Municipal Operations Center (MOC)
- MGE leases rooftop for 25 years, with option to extend lease up to an additional 10 years.
- No monthly or annual rent provision; as consideration for lease, MGE agreed to finance and install solar array for City at Police Department
- MOC lease provisions include:
  - site access and control
  - engineering reviews
  - installation and maintenance
  - roof top repairs, replacement and warranties
  - system removal
  - insurance and liability
  - permitting
  - system output ownership and renewable energy credits
  - lease termination

# Police Department solar

- City leases police department roof to MGE for 25 years
- MGE installs 100 kW solar array on roof
- City/MGE enter into a separate power purchase agreement (“Solar Services Agreement”)
  - MGE sells solar power generated by PD array to City, approximately 25% of electricity needs of PD
  - Solar power is sold at rate comparable to regular electricity purchased for the building
  - MGE finances and installs solar array at no cost to the City
  - MGE initially owns solar equipment and electricity generated by system

# Option to Purchase

- Agreements include City option to purchase police department solar array in five years
- Allows MGE to monetize solar tax credits, then sell system to City
- Determination of price of system at sale tied to fair market value
  - MGE initial investment estimate: \$253,000
  - City purchase price “base case” estimated to be \$83,000 in year seven

# Success of Projects

- Two willing partners
- Open to innovating and finding solutions
- Declining price of solar
- 30% Federal Investment Tax Credit
- Success can be replicated

# Thank You

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