

# Solar PV City of Northampton Glendale Road Landfill

09/29/2015

*Ameresco's Solar PV Grid-Tie Group  
has Built 100% of its Awarded  
Projects*



Acton, MA

**AMERESCO**   
Green • Clean • Sustainable

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# Who is Ameresco?

- **One of the largest independent Energy Services company in North America**
- **Profitable company**  
Unique in the solar industry
  - 2014 Revenues: \$593 million
  - 2014 Net Income: \$10 million
- **Headquartered in Framingham**
- **Solar PV development, design, maintenance and operations are all local – serving numerous MA City and Towns**



**66 offices in 34 states  
and 5 provinces**

***Ameresco has built 100% of its awarded solar PV projects***

# Ameresco National and Local Solar PV Experience



- USA and Canada:
  - 49.5 MW of constructed solar PV
  - 8.6 MW under construction
- Massachusetts:
  - Over 20 MW of constructed solar PV
    - 7.2 MW rooftop
    - 8.6 MW ground-mount
    - 5.7 MW landfill
  - **Plus 8 MW of landfill projects in construction/development**

# Ameresco Landfill Solar PV Experience



Lowell, MA

Sudbury, MA



Weston, MA



Acton, MA



Braintree, MA

# What are the benefits of Solar PV on Landfills?

## Solar PV on a landfill is:

- Quiet
- Clean
  - No greenhouse gas (GHG) emissions
  - No other air pollutants
  - No impact on local water quality
  - No need to use water to generate energy
- Beneficial use of a large space with limited use options
- Low impact and compliant with state & local permitting requirements
- Low-Maintenance
  - One annual preventative maintenance visit
  - Mow twice per year





## Projected Environmental Impact

In the first year of operation:

- 4.25 million kWh of electricity generation
- 2,931 metric tonnes of CO<sub>2</sub>e avoided, equivalent to:
  - taking 617 cars off of the road
  - carbon sequestered by 2,402 acres of forest

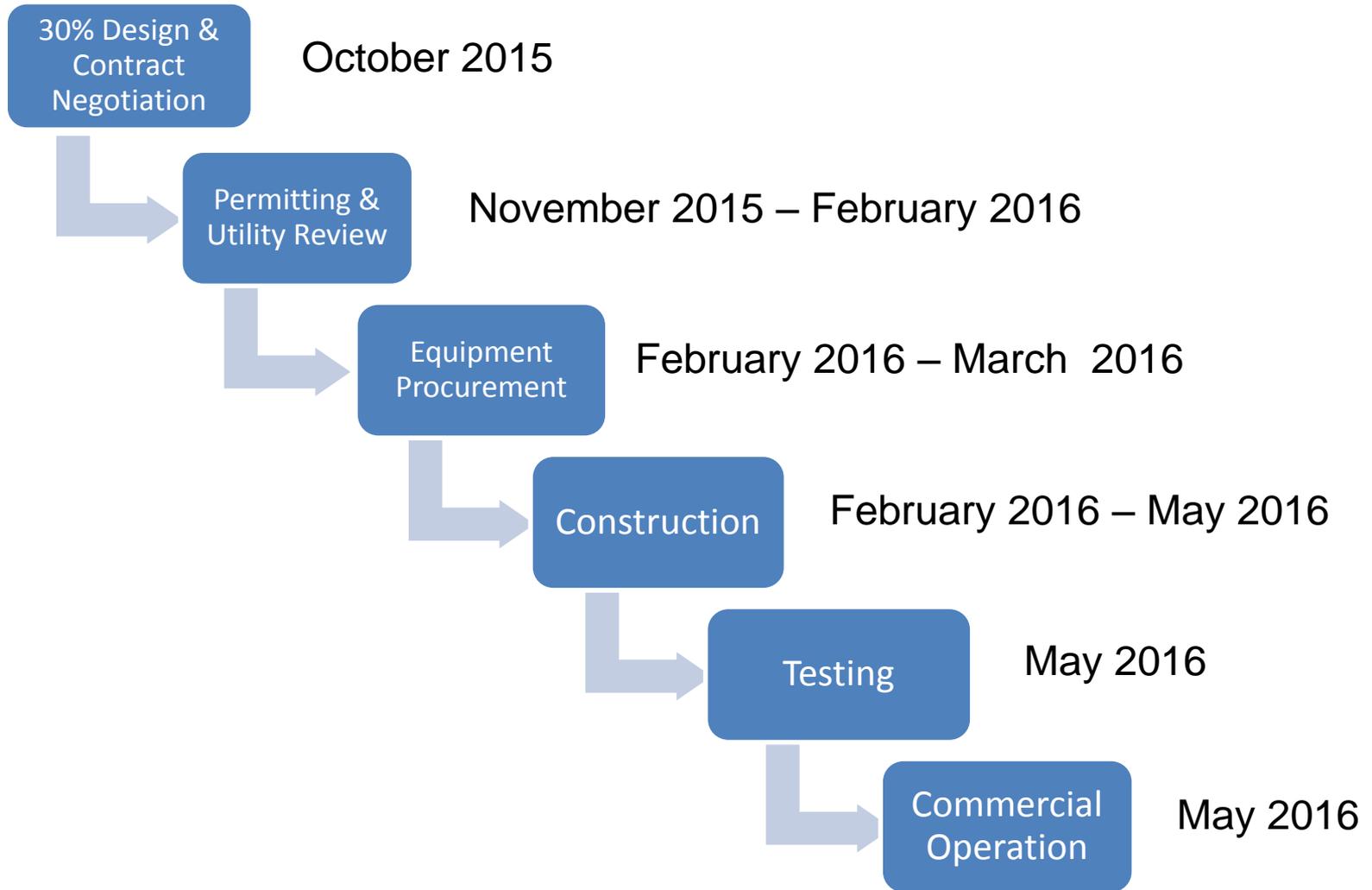
Over 20-years of operation:

- 81 million kWh
- 55,854 metric tonnes of CO<sub>2</sub>e avoided, equivalent to:
  - taking 11,759 cars off of the road
  - carbon sequestered by 45,782 acres of forest

Source: US EPA Greenhouse Gas Equivalencies Calculator



# Preliminary Project Schedule



# What to expect during construction?

## Overall Construction Duration 4-6 Months

- Ameresco manages all construction activities
- Ballasted system – no trenching – protects cap with minimal disturbance
- Ground screw system for ground mount section
- Access from Glendale Road – will coordinate with transfer station operations
- Deliveries of major equipment via tractor-trailer on select days over 2-3 weeks
- Other equipment deliveries by box truck
- Work hours comply with City requirements

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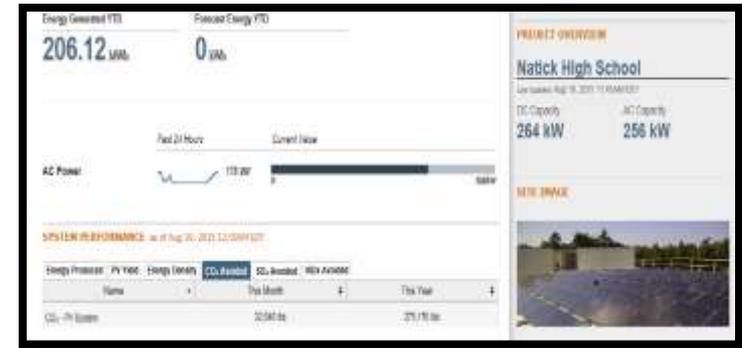
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# Curriculum Materials and Displays for Teachers

- **Curricula accessible online**
- **LCD display in a school or City building**
- **15 Solar PV Topics for K-12**
  - Renewable energy fundamentals
  - Solar PV design considerations
  - Data analysis
- **Teacher topic summaries**
- **Topics matched with STEM Frameworks**



Middle school students showing solar panel to Mayor William A. Flanagan of Fall River

# Rendering of Northampton Solar PV Project



# Rendering of Northampton Solar PV Project from the West



# Rendering of Northampton Solar PV Project from the West



# Rendering of Northampton Solar PV Ground Mount Site Line



# Thank You

If you have any questions,  
please contact:

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Braintree Landfill  
Ballast Blocks  
COD: January 2015

