



## Energy Integrated Solar PV System

### PROJECT DESCRIPTION:

The sophisticated nature and exceptional results of Tri-M's solar PV array are possible through close collaboration with our energy optimization partner, Tangent Energy Solutions. This system offers significantly better results than a typical solar installation because it is fully integrated with the Building Automation System which manages lighting, HVAC, and other energy loads in the facility.

Typical solar installations are helpful but somewhat limited because they are dependent upon weather conditions. Building Automation Systems are useful for conserving energy and controlling peak demand, but the results are limited unless normal work patterns can be interrupted. Our integrated approach combines the two technologies and actively manages the energy consumption and peak demand in the facility without interrupting normal work patterns and provides a highly predictable energy profile regardless of the weather.

The solar PV array, is comprised of three separate elements, a 52.28kW roof-mounted array, a 33.83kW ground-mounted array, and a 15.79kW parking canopy array. Together, these elements offset approximately 130,000 kWh of Tri-M's energy consumption annually. The array also includes a weather station and a custom built monitoring system that tracks results in real time.

This integrated approach produces significantly better results than either system could produce operating independently. Tri-M's peak demand has been reduced by more than 50% and annual energy savings are more than \$10,000 at current utility rates.

### PROJECT LOCATION:

The Tri-M Group Headquarters,  
Bldg 3, Kennett Square, PA

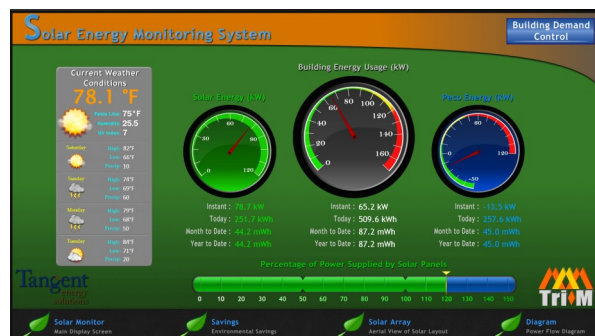
### PROJECT SCOPE:

- ◆ 101.89 kW Solar PV Array
  - ◆ 52.28 kW Roof Mount
    - ◆ Azimuth: 178° Tilt: 25°
  - ◆ 38.83 kW Ground Mount
    - ◆ Azimuth: 178° Tilt: 25°
  - ◆ 15.79 kW Parking Canopy
    - ◆ Azimuth: 88/178° Tilt: 5°
- ◆ Integrated Weather Station
- ◆ Custom Monitoring System/Public Display
- ◆ Building Automation System
- ◆ Integration with PV Array & Energy Optimization System
- ◆ Lighting Retrofit
- ◆ HVAC Controls

### CONTACT:

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### PROJECT RESULTS:

- ⇒ 130,000 kWh Annual Energy Production
- ⇒ Peak Demand reduced by 50%
- ⇒ 1st Year Energy Spend Reduced by more than \$10,000