

Your Trusted Sustainability Partner.





Ameresco Introduction  
Energy Savings Performance Contracting  
Renewable: Solar PV Systems  
Preliminary Assessment Findings  
Next Steps

# Who is AMERESCO?

## Leading Independent Energy Services Provider

**1,000**

More than 1,000 Employees

**\$5B**

Over \$5 Billion in Energy Solutions Delivered Since Inception  
(Including Our Predecessors)

**\$750M**

\$750 Million Bonding  
Capacity with a Per Project  
Maximum of \$150 Million

**\$2B**

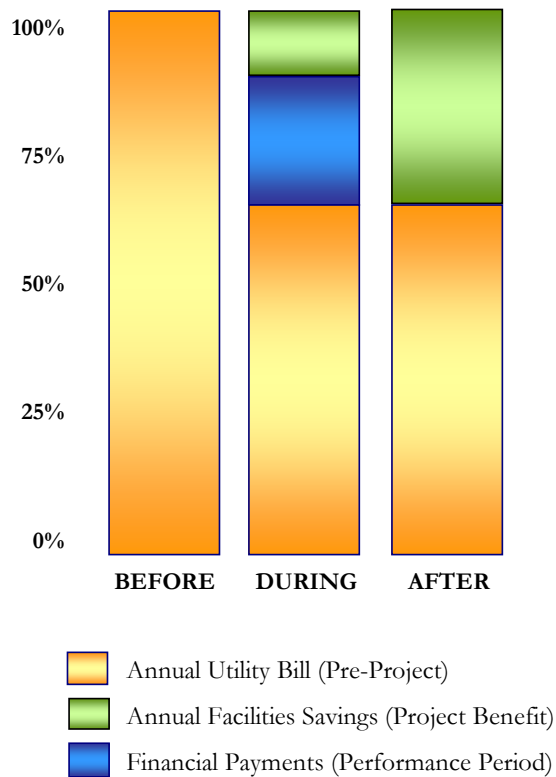
Sourced and Raised over \$2 Billion  
of Project Financing

**\$630.8M**

2015 Annual Revenue of  
\$630.8 Million

# Energy Savings Performance Contracting

CHANGES TO YOUR  
ANNUAL UTILITY BUDGET



- Minnesota State Statute [§471.345](#) Energy Efficiency Projects
- Energy savings pay for infrastructure improvements
- Energy savings guaranteed
- Take advantage of grants, utility rebates, local incentives, etc.
- Self-funded with little or no capital
- Project Guaranteed up to 20 Year Term
- Flexible and Competitive Financial packages

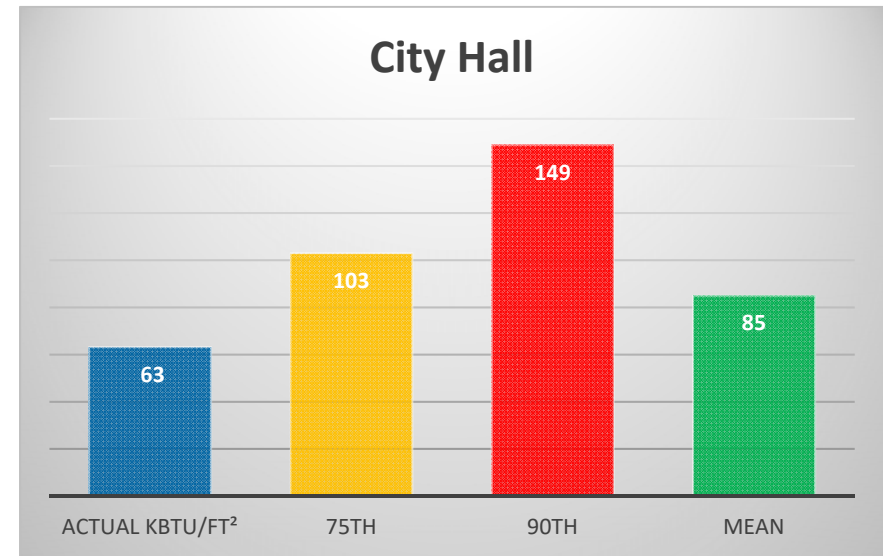
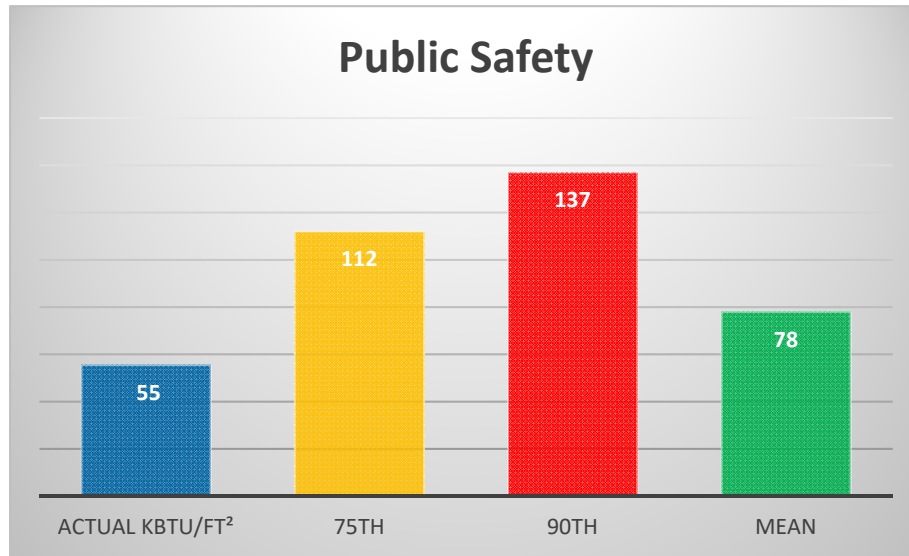
Potential for “Deeper” Facility Upgrades



## Preliminary Assessment Findings



# City of Northfield Energy Use Index (EUI)



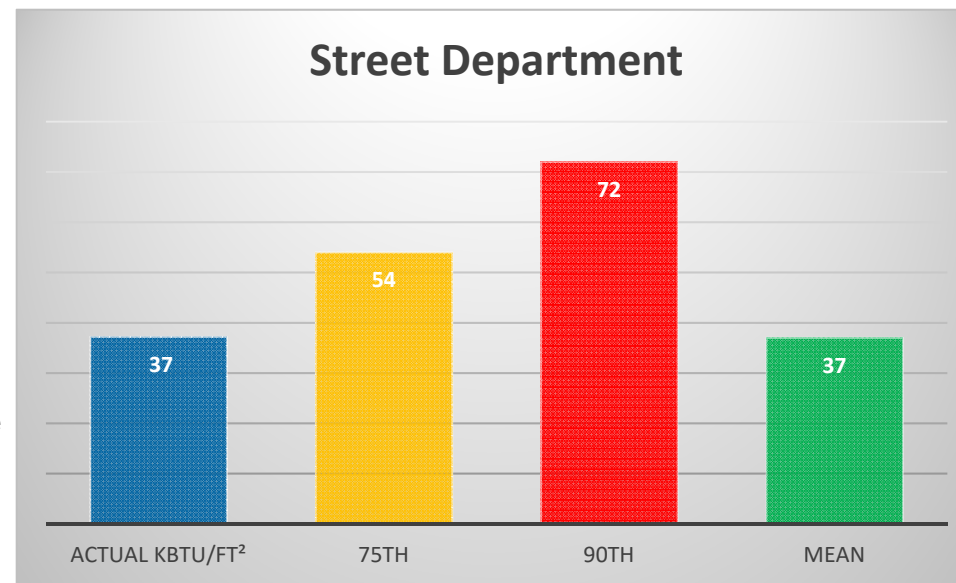
Comparison with  
CBECS\* Standards:

75% of CBECS

90% of CBECS

CBECS Mean/Avg

\* Ref Standard: Building Energy Use  
Index from the Commercial/  
Building Energy Consumption  
Survey (CBECS) / ASHRAE 2003



# Preliminary Project Scope Summary

## General List of Facility Improvements for Further Investigation

### *Self Funding Improvements*

- ◆ Building lighting retrofits & lighting controls
- ◆ LED Street lighting upgrade
- ◆ Building controls & automation
- ◆ Motor & VFD upgrade
- ◆ Mechanical Insulation
- ◆ Building Envelope

### Additional Funding Sources to be fully evaluated in Next Phase of Project Development

- ◆ Energy, operations and other short/long term budget savings opportunities
- ◆ Xcel Energy Rebates - (based on final project scope)
- ◆ 3rd Party Financing
- ◆ Other sources to be explored in next phase of project development

## Self -Funding

Est Cost: \$ 750 K

### Benefits

- City Infrastructure Improvements using Energy Conservation Measures
- Energy cost savings pays for **entire project!**
- Self-Funding from Cost Savings
- How? - Repurposes current utility budget dollars to fund improvements
- Upgrade existing equipment/systems with new efficient equipment
- Reduces Future O&M costs (materials and service contracts)



Self-Funded Project	
Estimated Project Size	\$ 750 K
Est Annual Cost Savings	\$ 37 K
Utility Rebates Estimate (one time only)	\$ 5 K
Capital Contribution Required	\$0



# Other Project Improvements w/Cost Savings

## Other Capital Projects (Improvements) to Consider

- ◆ Upgrade WWTP positive displacement blowers w/ new high efficiency blowers (12 blowers)
- ◆ Upgrade WWTP make-up air units w/ new high efficiency units (all 10 MAUs)
- ◆ City Hall - Steam Boiler conversion to efficient Hydronic Condensing boiler system
  - Redundant hydronic boilers, piping, radiant heater upgrade to HW
- ◆ Replace select City Hall package roof top units
- ◆ Upgrade Ice Arena Lighting w/ programmable LED lighting
- ◆ Solar PV system – renewable onsite energy generation

## Benefits

- ◆ Energy consumption/future capital costs reduction
- ◆ Future capital cost avoidance project (as these projects are already on the City's replacement schedule)

# Northfield WWTP Solar PV Opportunities



50 kW AC

Size based on  
available space and  
energy consumption  
needs

Further Investigation for Optimal  
Solar PV sizing required

170 kW AC



## Project - Leveraging Savings

Est Cost: \$1.2M - \$2.4 M

### Benefits

- Includes self-funding project Scope of Work
- Bundle self-funding ECMs with short term payback to benefit ECMs with longer term paybacks
- Reduces Future O&M costs(not yet determined)
- Leveraging up to \$725 K to complete \$2.4 M of infrastructure improvements



Leveraging Cost Savings	
Estimated Project Cost	\$ 1.2M - 2.4 M
Est Annual Cost Savings	\$62 K - \$ 67 K
Utility Rebates Estimate (one time only)	\$13 k - \$ 15 K
Capital Contribution; Future Capital Cost Avoidance	\$200k - \$725 K

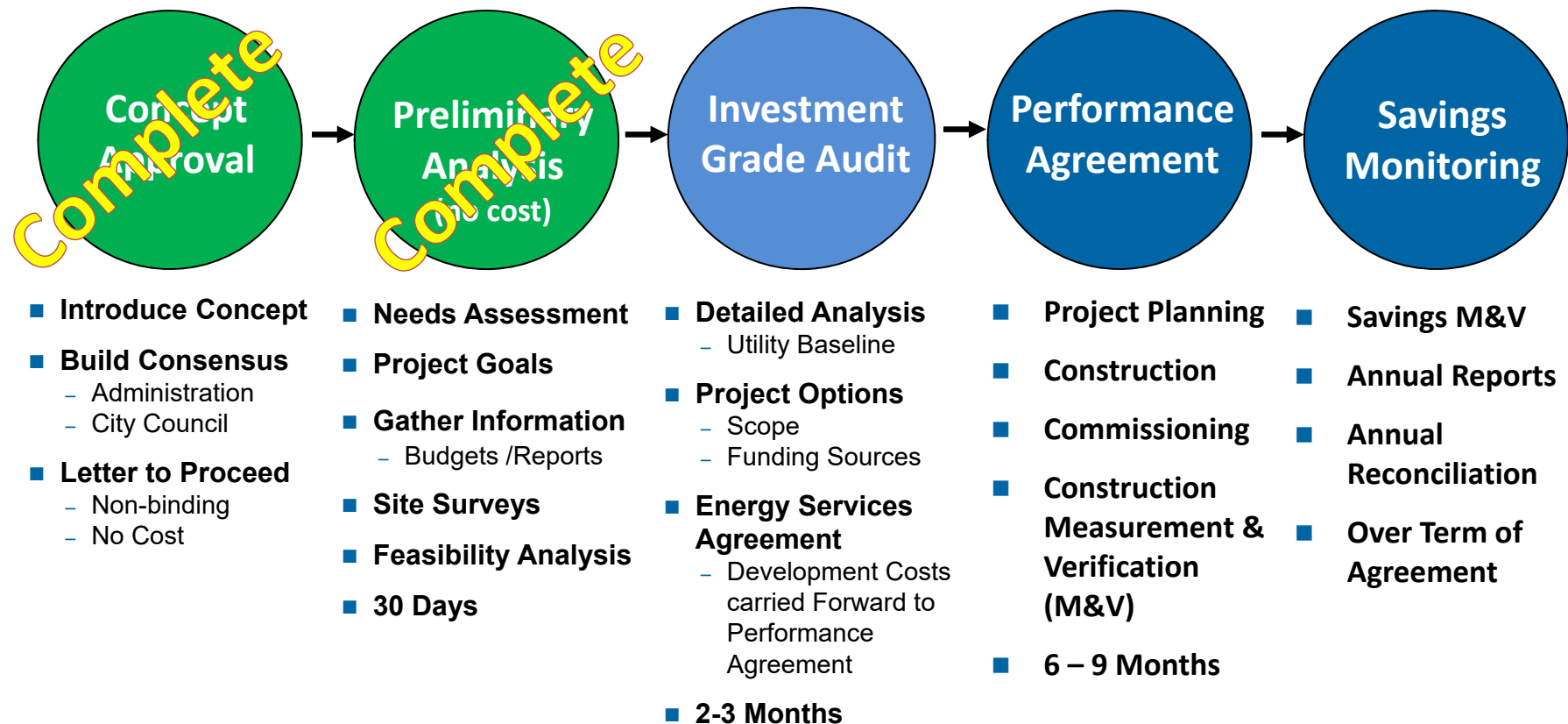


Next Steps



# Energy Performance Contract – Project Development Stages

Long-Term Partnership Process from Concept through Savings Reconciliation



Streamlined Implementation – Minimizes In-House Staff Time & Quicker Results



# Next Steps

- Council approves Project Development Agreement to develop self-funding Energy Savings project
  - ◆ Ameresco will complete a Detailed Analysis to identify a *self-funding* project, or there is No Cost to City of Northfield
  - ◆ In the event the City of Northfield does not move forward with a viable self-funding project, an agreed upon “exit fee” would be invoiced
  
- Deliverables: Three Project Options; each w/ scope of work, energy and O&M costs savings, & funding options
  - ◆ Project A: Self-Funding Project
  - ◆ Project B: Includes Project A Scope w/ additional equipment Improvements (considers capital cost avoidance)
  - ◆ Project C: Includes Project B Scope w/ additional equipment Improvements (considers capital cost avoidance)

# Project Summary

## Project Benefits for City of Northfield

- ◆ Self-funded infrastructure improvements
- ◆ New high efficiency systems require less future maintenance (future avoided cost savings)
- ◆ Improved building operational control
- ◆ Energy cost savings guarantee
- ◆ Combining a energy savings project with Solar allows the City to leverage energy savings to help fund Solar
- ◆ Low finance rates (rising finance rates)
- ◆ Combining energy savings and capital now to complete capital improvements
- ◆ Ameresco will train operational/maintenance staff

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## CITY OF APPLE VALLEY, MINNESOTA

### Contract Details

#### Contract Type:

Energy Savings Performance Contract

#### Customer Type:

City (Population 50,000)

#### Facility:

403,325 square feet  
11 buildings

#### Technology Type:

Energy Efficiency

#### Energy Savings:

\$ 43,768 annually

#### Energy Project Size:

\$ 899,650

### Summary

Ameresco completed construction on a \$899,650 Energy Savings Performance Contract (ESPC) at the City of Apple Valley, MN in the winter 2014.

Facility upgrades were implemented at 11 buildings, which included:



*Apple Valley Municipal Center*



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