

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

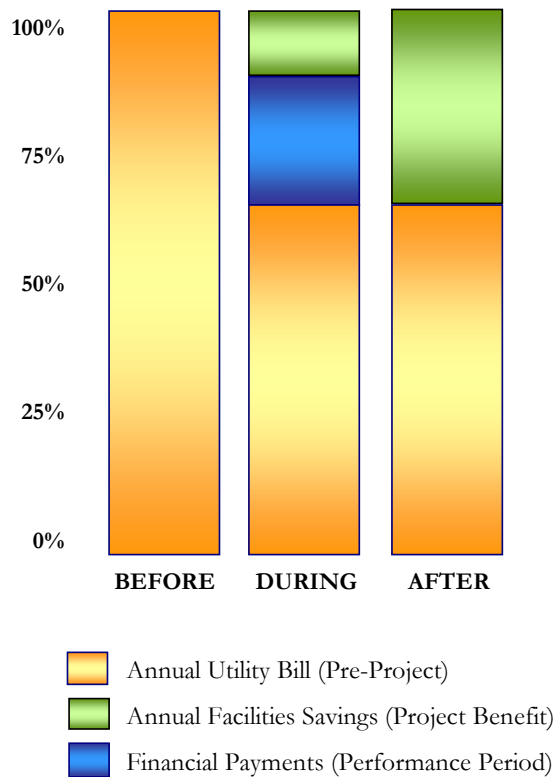
Sourced and Raised over \$2 Billion
of Project Financing

\$630.8M

2015 Annual Revenue of
\$630.8 Million

Energy Savings Performance Contracting

CHANGES TO YOUR
ANNUAL UTILITY BUDGET



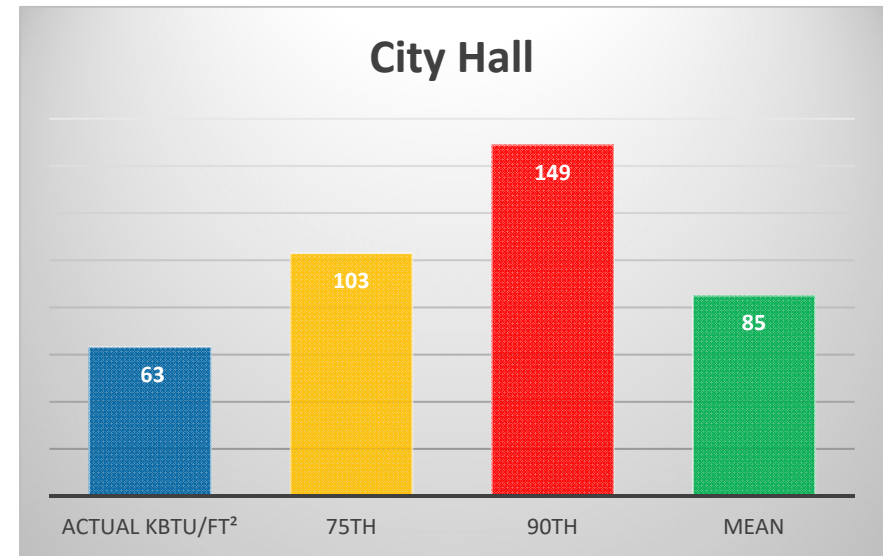
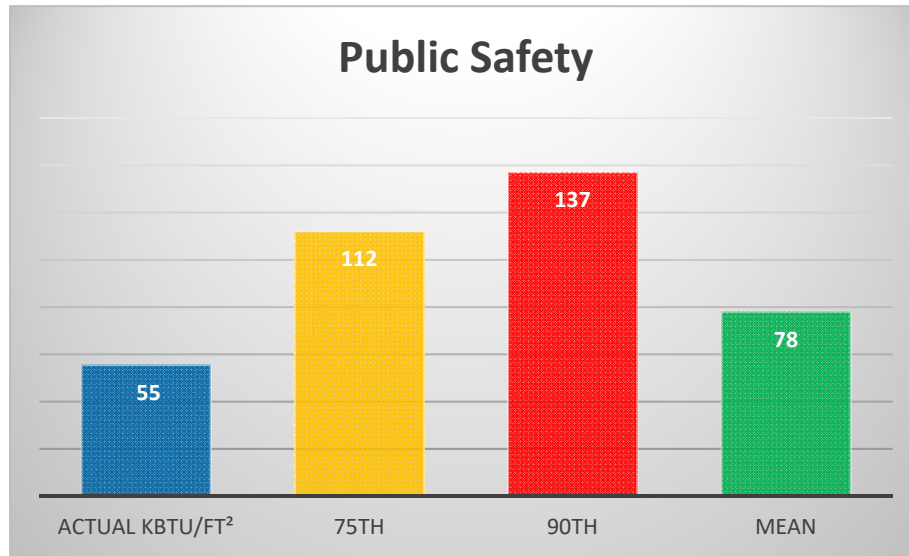
- Minnesota State Statute [§471.345](#) Energy Efficiency Projects
- Energy savings pay for infrastructure improvements
- Energy savings guaranteed
- Take advantage of grants, utility rebates, local incentives, etc.
- Self-funded with little or no capital
- Project Guaranteed up to 20 Year Term
- Flexible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

Potential for “Deeper” Facility Upgrades



Preliminary Assessment Findings

City of Northfield Energy Use Index (EUI)



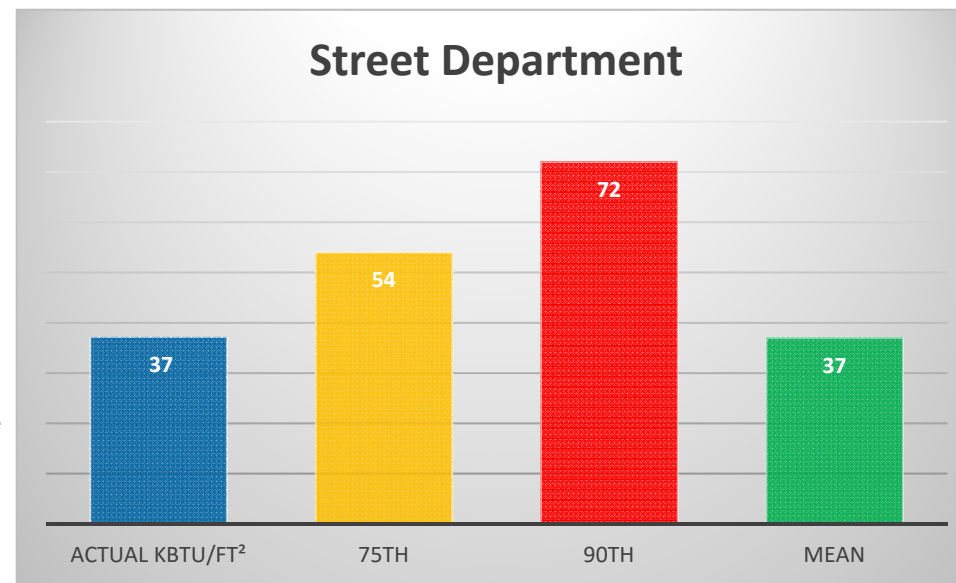
Comparison with
CBECS* Standards:

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



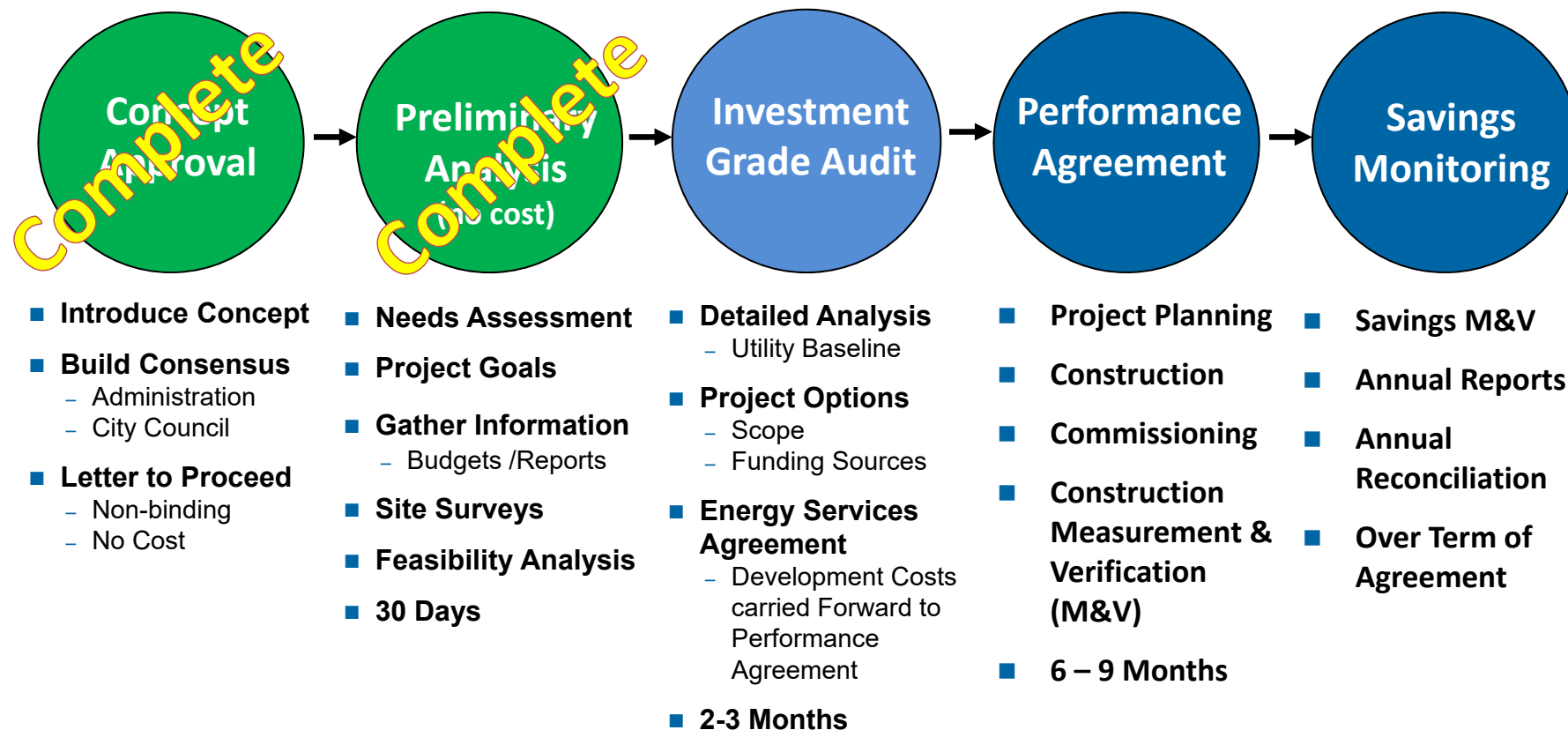
Leveraging Cost Savings	
Estimated Project Cost	\$ 1.2M - 2.4 M
Est Annual Cost Savings	\$62 K - \$ 67 K
Utility Rebates Estimate (one time only)	\$13 k - \$ 15 K
Capital Contribution; Future Capital Cost Avoidance	\$200k - \$725 K



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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- "Ameresco"

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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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