



# Commons Energy

Saving Energy,  
Strengthening  
Communities

**Presentation to NEBHX**

*Introduction to a  
Public Purpose ESCO*

**April 27, 2017**

## Purpose:

Commons Energy provides total-energy solutions for owners of small to mid-size, public-purpose buildings

## Result:

Lower energy use, immediate cash flow, and increased comfort and affordability



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# Commons Energy:

*A public-purpose energy services company (PPESCO)*

Commons Energy  
seeks to achieve  
**deep energy**  
**savings** in small  
and medium-sized  
under-served  
**public-purpose**  
buildings.

# Benefits of Energy Savings

*Through Performance Contracting for Public Purpose Buildings*

- Enable customer to focus on mission
- Long term reduction in operating costs
- Improved learning, living and working environments
- Address deferred maintenance
- Reducing capital needs
- Improved long-term financial security
- Job creation

# What is needed is a Public Purpose ESCO

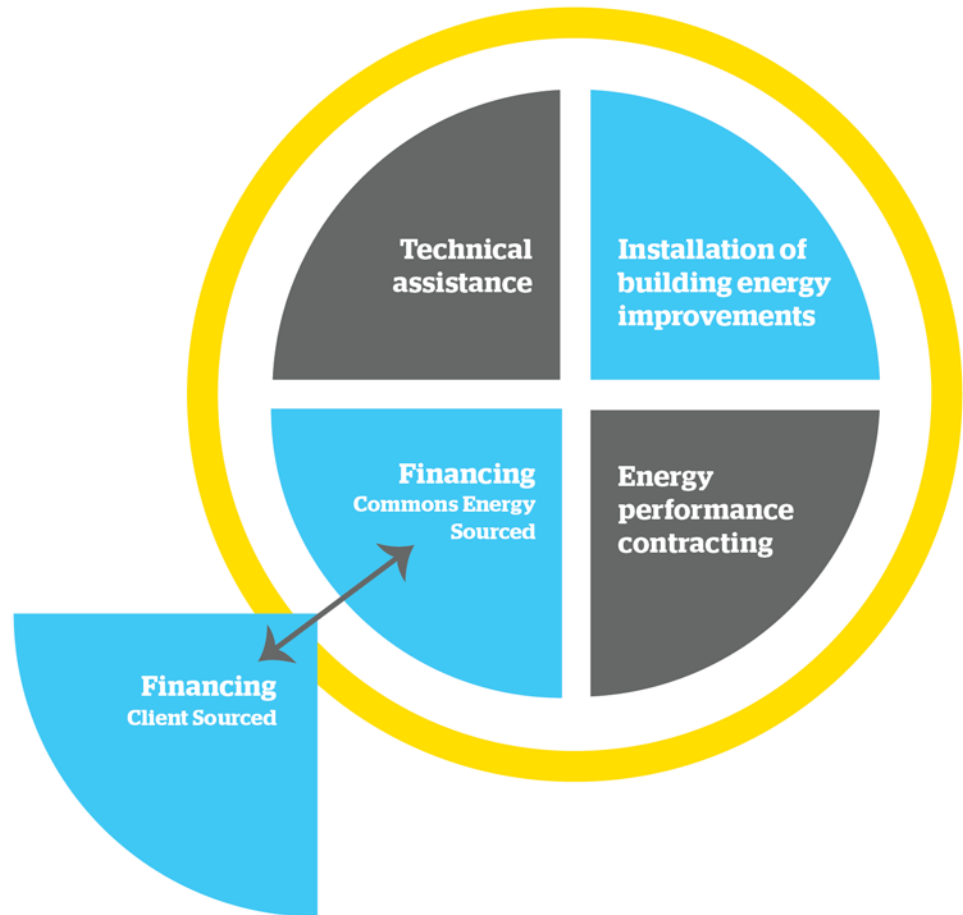
- That is willing to work with public use clients and public use facilities
- Working in all four market sectors
- That has the ability to overcome significant client barriers
- That is focusing on underserved buildings based on size & complexity
- That has access to patient capital



# Method:

Four-part set of integrated services offering comprehensive, whole-building, client-based solutions to existing barriers

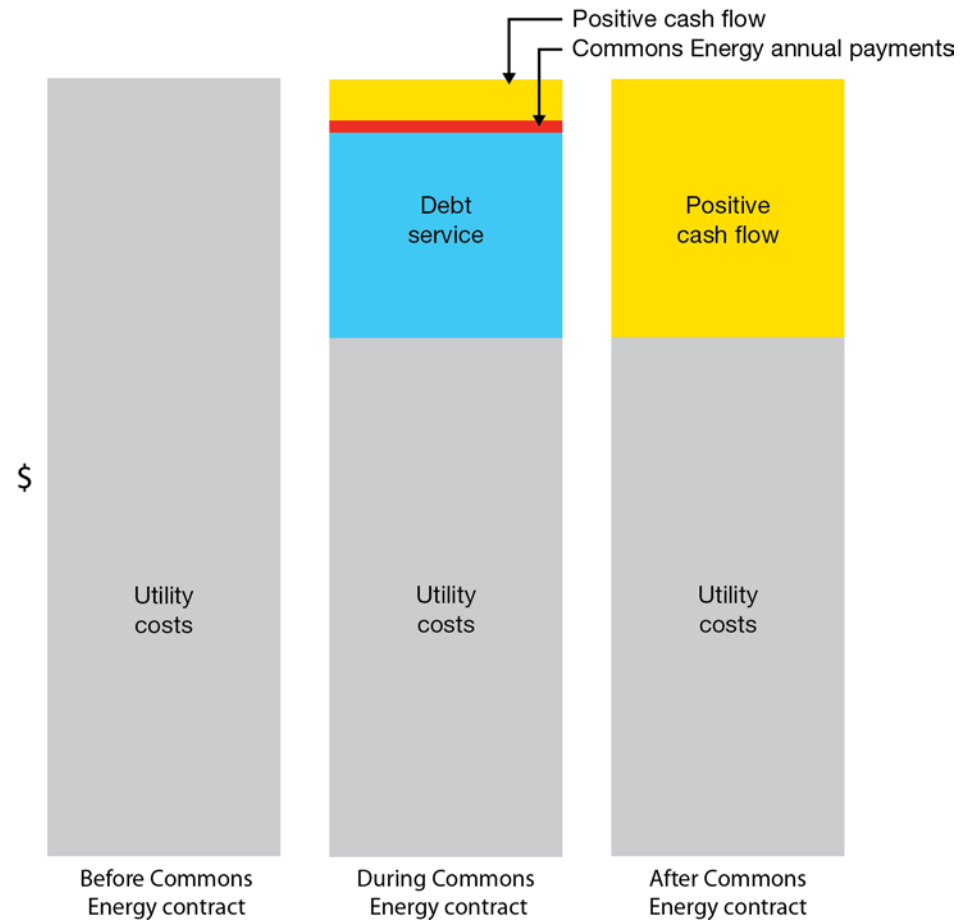
## Commons Energy Integrated Services Model



# Approach:

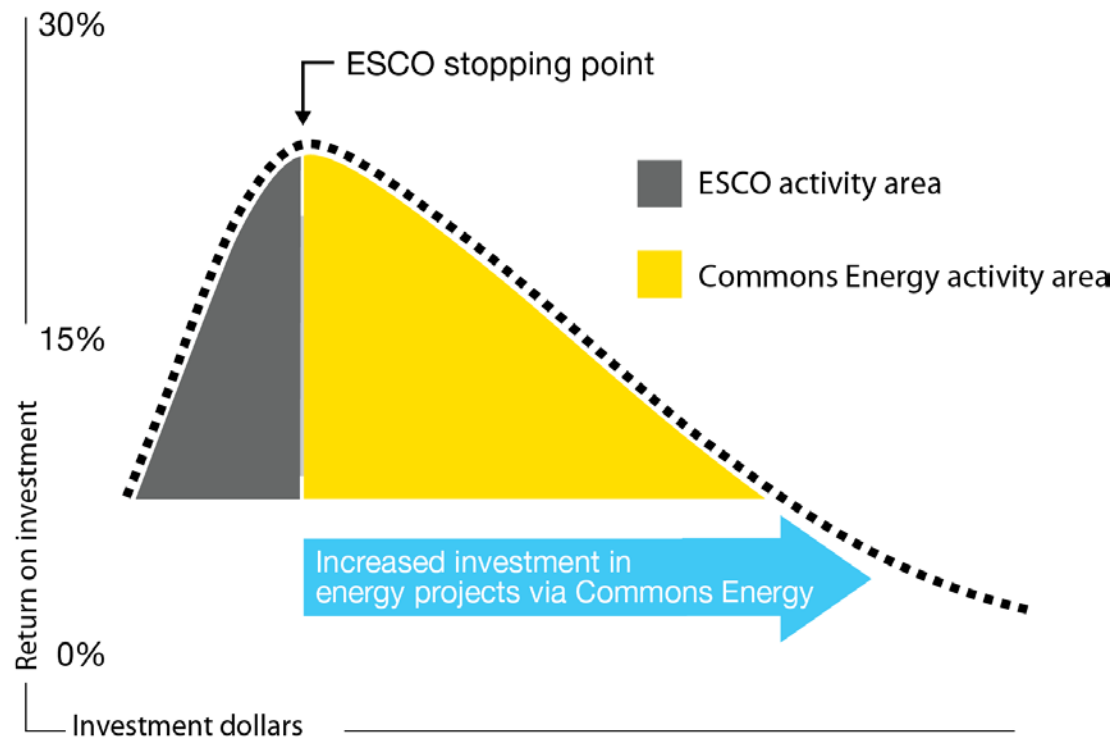
Deepens and extends the ESCO model of future savings to fund improvements, replacing objective of public benefit to traditional private returns

## How Commons Energy Builds a Client's Positive Cash Flow



# VEIC formed Commons Energy to address unmet needs

## How Commons Energy Builds a Client's Positive Cash Flow





# Commons Energy is different

## Mission

- Public purpose buildings
- Deep energy savings of 30% or more

## Economics

- Low Profit Limited Liability Corporation (L3C)
- Open book, cost-plus model with low markups

## Capital

- Access to “patient capital”
- Credit enhancements



MacArthur  
Foundation



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KRESGE  
FOUNDATION

# How can a PPESCO operate in these markets when traditional ESCOs cannot?

## Answer:

- The economics are different
- The mission is different
- The source of capital is different
- The risks and rewards are different

## Darling Inn Lyndonville, Vermont



### Project Type

Comprehensive Retrofit

### Project Description

The Darling Inn is a 28-unit apartment building located at 76 Depot Street in Lyndonville, VT. Originally a hotel built in 1928, the Darling Inn was converted to serve as an apartment building in the 1970s. The Darling Inn is undergoing a complete facility retrofit. Darling Inn has an outdated thermal shell and an existing heating system that is complicated; the first floor is heated by an oil boiler and the second and third floors heated with electric storage heaters.

### Engineering and Design

N/A

### Construction Management

Commons Energy will provide both construction project oversight and commissioning services for Darling Inn.

### Project Partners

RuralEdge, Amy Wright, Vermont Fuel Efficiency Partnership, Efficiency Vermont

### Measurement and Verification

Commons Energy will monitor boiler system performance and provide annual performance evaluation reports.

### Project Financing

None from Commons. Client was able to obtain long-term financing at a very favorable rate from a federal government program.

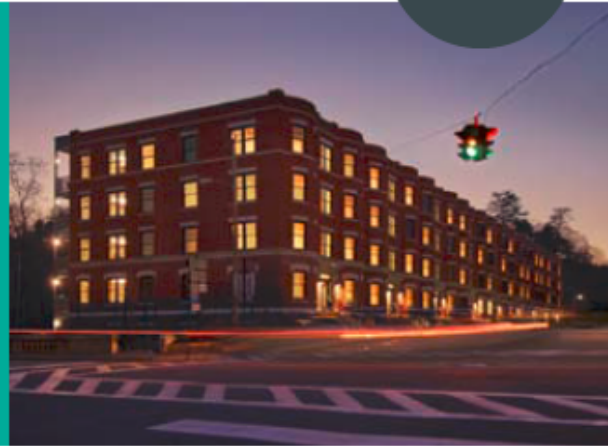
### List of Improvements

- Upgraded insulation and air-sealing
- Heat Recovery Ventilation
- Biomass Boiler

### Projected Savings

Improvements will reduce the per-unit cost to heat and provide hot water to each unit by 56%.

## Union Square Apartments Windsor, Vermont



### Project Type

Biomass Fuel Switch

### Project Description

Union Square Apartments is a 58-unit apartment building located at 7 Union Street in Windsor, VT. Comprehensive energy efficiency opportunities were implemented several years ago. The facility currently burns 17,000 gallons of fuel oil annually to provide heat and domestic hot water, and facilities management is interested in switching to a biomass boiler to reduce heat and hot water costs. This is a capstone project for the property; a final energy-related upgrade that was left undone after the retrofit.

### Engineering and Design

Commons Energy will develop mechanical performance specifications and a scope of work to guide bid solicitation from biomass mechanical contractors who will bid on providing installation of biomass boiler(s), fuel storage, fuel distribution, and fuel delivery systems.

### Construction Management

Commons Energy will oversee the installation of building energy improvements, including work specification, bid solicitation and review, contracting, construction and project management, and building / system commissioning.

### Project Partners

Housing Vermont, Windham and Windsor Housing Trust

### Measurement and Verification

Commons Energy will monitor boiler system performance via remote monitoring and provide annual performance evaluation reports. Commons Energy will facilitate access to necessary training for facilities staff involved with the daily maintenance and operation of the new biomass system.

### Project Financing

Lead underwriting provided by National Housing Trust Community Development Fund, with additional fixed-rate project financing provided by Commons Energy.

### List of Improvements

- Biomass boiler replacement
- High Performance Circulator Pumps and integral control VFDs

### Projected Savings

The investment is expected to reduce heating and hot water costs by at least one-third.

# Key Takeaways

- Target buildings that serve vital public functions, and because of size or other barriers are not being served by the traditional energy efficiency service market.
- Energy savings in these buildings result in operating cost reductions sufficient to support debt repayment and help the building owner/manager maintain optimum energy performance, and (in most cases) create positive cash flow
- PPESCOs are able to channel more \$s into the ECMs as a result of their mission-driven business model.
- Improving the economics of a public purpose organization is a public good that benefits us all!



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## Questions about Commons Energy?

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