

Minnesota's Guaranteed Energy Savings Program (GESP)

Solar Powering Minnesota 3/7/14

Lindsay Wimmer, GESP Outreach Coordinator,
Clean Energy Resource Teams

Agenda



- **Division of Energy Resources & CERTs Roles**
- **Energy Savings Performance Contracting**
- **The Power of Bundling Energy Conservation Measures**
- **Minnesota's new Guaranteed Energy Savings Program**
- **Energy Savings Performance Contract Case Studies**
- **Project Development Process**
- **Getting Started**

Department of Commerce Division of Energy Resources



Energy Savings Programs



Peter Berger

Eric Rehm

A screenshot of the Minnesota Department of Commerce website, specifically the Energy Savings Program page. The page features a green header with the "commerce.energy" logo and a navigation menu. The main content area is titled "Energy Savings Program" and includes a description of the Guaranteed Energy Savings Program (GESP). A sidebar on the left lists various topics, and the main content area is divided into sections for "What We Do", "Program Goals", "Performance Contracts", "Project Development Process", "Program Resources", and "Contact Us".

COMMERCE: BANKING & FINANCE + ENERGY + INSURANCE + WEIGHTS & MEASURES

MINNESOTA DEPARTMENT OF commerce .energy

CONSUMERS SERVICE PROVIDERS UTILITIES MEDIA TOPICS ABOUT US

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HOW DO I...

Home > Topics > Financial Assistance > Energy Savings Program

Topics

- Careers
- Clean Energy
- Conservation Programs
- Efficiency
- Energy Projects & Rates
- Financial Assistance
 - Grants & Loans
 - PACE
 - Rebates & Credits
 - Requests for Proposals
 - What We Do: Financial Assistance
 - Energy Assistance Program
 - Energy Savings Program
 - Contact Us
- Performance Contracts
 - Program Goals
 - Program Resources
- Project Development Process
 - What We Do
- Weatherization Assistance Program
- Information Resources

Energy Savings Program

The Guaranteed Energy Savings Program (GESP) provides technical and financial assistance to state agencies, local government units, school districts, and institutions of higher learning.

What We Do	Program Goals	Performance Contracts
Summary of our role in the program including the technical and financial assistance available we are able to offer.	How the program supports public institutions in implementing energy efficiency and renewable energy retrofits.	Definition and description of the Guaranteed Energy Savings Program energy savings performance contract.

Project Development Process	Program Resources	Contact Us
Summary of 4-phase process used to develop an energy efficiency and renewable energy project.	List of the ways this program will enable public entities to achieve energy savings in their facilities.	Get in touch by phone or email to ask us questions about the program.

www.energy.mn.gov

What we do ...



- **Program Development and Administration**
 - Pre-qualify ESCOs (contractors)
 - Master Contract and Procurement Documents
- **Opportunity Assessment**
 - B3 Benchmarking Data
 - Needs, Issues and Goals
- **Technical Assistance**
 - Project Development Assistance
 - Project Implementation Oversight
 - Annual Project Performance Evaluation

Clean Energy Resource Teams

What We Do...



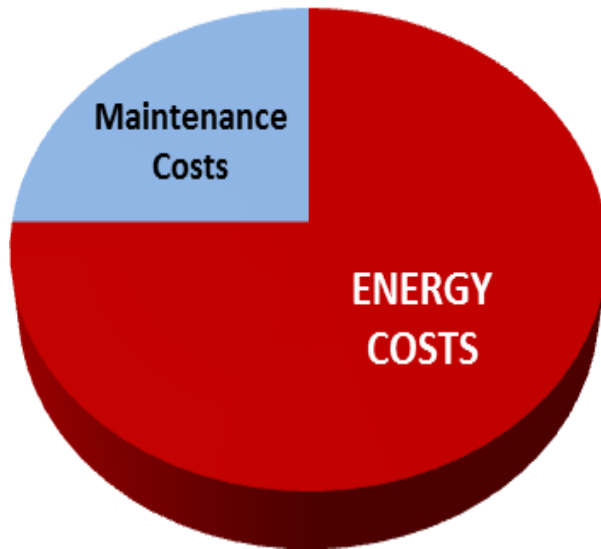
Lindsay Wimmer

- Answer questions & program outreach
- Help local governments assess opportunities for GESP
- Connect YOU with the Department of Commerce to enter into the program

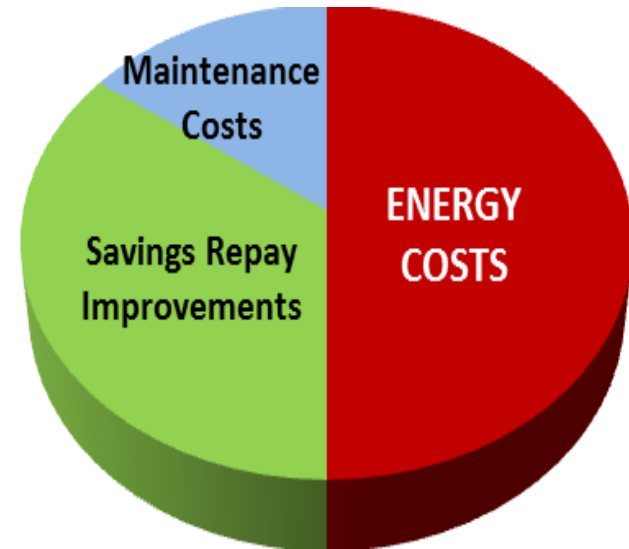
What is Energy Savings Performance Contracting?



Before Improvements



After Improvements



“The use of **guaranteed savings** gained from the maintenance, operations and utilities budgets, as **capital to make needed upgrades** to your building environmental systems, that is financed over a specified period of time.”

U.S. Department of Energy



The Power of Bundling

Conventional Wisdom

- **Benchmark your buildings**
- **Identify the worst performers**
- **First implement No-Cost Energy Conservation Measures (ECMs)**
- **Next use available funds to implement Low-Cost ECMs**
- **Continue up the payback ladder until available funds are gone**
- **Move on to the next worst performing building when additional funds become available**

The Power of Bundling Scientific Reasoning



Oak Ridge National Laboratory

Mixing Appropriations and Private Financing to Meet Federal Energy Management Goals

June 2012

Prepared by: John Shonder

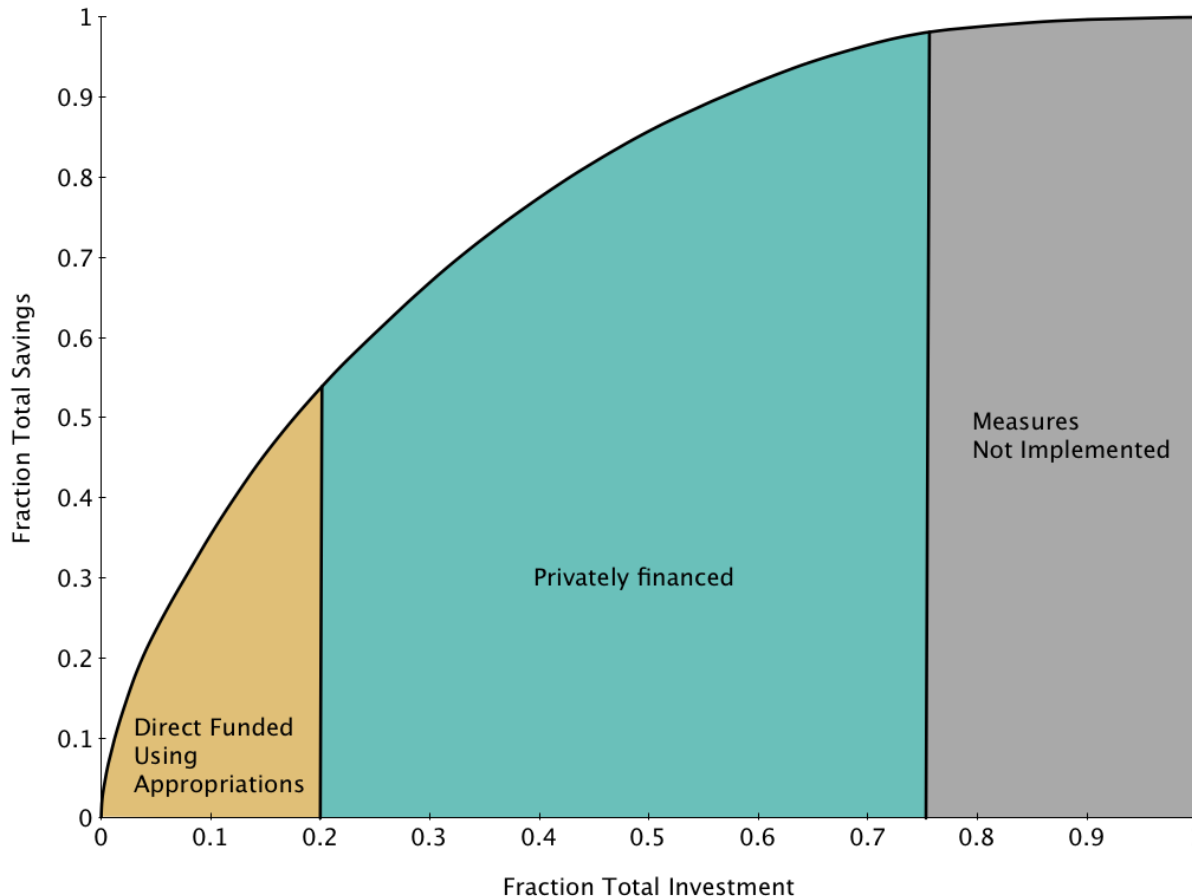
Source:

http://www.ornl.gov/sci/ees/etsd/btrc/publications/ORNL%20TM%202012_235.pdf

Appropriations Priority



- First, appropriations fund shortest-payback ECMs
- Next, private financing funds as many ECMs as possible

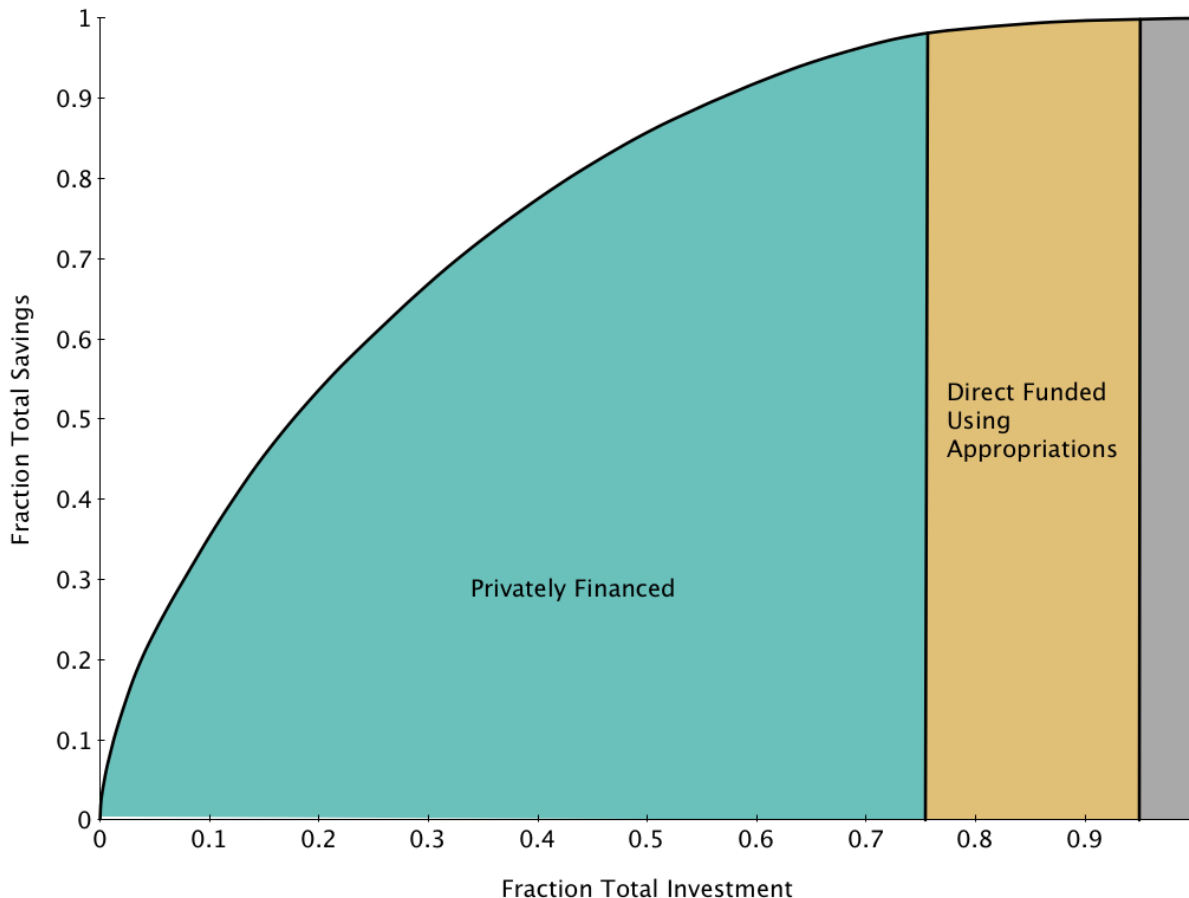


**Only 76% of
ECMs Can Be
Implemented**

Finance Priority



- First, private financing funds as many ECMs as possible
- Next, use appropriations on long payback ECMs



**95% of ECMs
Can Be
Implemented!**

Best Financing Strategy

- Use private financing to fund as many ECMs as possible beginning with the shortest-payback ECMs
- Use available appropriations as a one-time buy-down or to fund longer-payback ECMs that cannot be included in the project

“Using appropriations to fund short payback Energy Conservation Measures is like eating your seed corn.”

John Shonder
Oak Ridge National Laboratory

The Power of Bundling ECMs

Guaranteed Energy Savings Program (GESP)



- **Makes existing systems more efficient**
 - Retro-commissioning
 - System additions and enhancements
 - Operation & Maintenance improvements
- **Renews facility infrastructure by performing deep energy retrofits**
 - System re-design
 - Equipment replacement
- **Assures intended results continue to be achieved**
 - On-going savings Measurement & Verification
 - Performance Guarantee

Key Drivers of GESp



City Case Study

City of Hutchinson



Upgrades:

- Lighting - Liquor Store, Recreation Center, City Center, Library, Garages
- Variable Frequency Drives – Wastewater Treatment Plant

Total Project Cost: \$375,114

Annual Savings:

- Guaranteed Savings – \$32,571
- M&V Savings - \$60,271

Payback: 7 years

County Case Study

Brown County



Upgrades:

- **Lighting – Community Services, Courthouse/Law Enforcement Center, Government Center**
- **HVAC & Controls Upgrade – County Courthouse**
- **Chilled Water System Upgrade – Courthouse / Law Enforcement Center**

Total Project Cost: \$1,622,390

Annual Savings:

- **Guaranteed Savings - \$71,709**
- **Actual 1st Year Savings - \$77,200**

Payback: 21 years

GESP is a Strategy to ...



Reduce

Energy Use

Operation &
Maintenance
Costs

Renew

Facility
Infrastructure

Occupant
Comfort, Health &
Safety

Achieve

GHG Emission
Reduction

Job Creation

Use of Renewable
Energy

Budget Neutral – No Bond Funds Required

Why use GESP?



State provided Technical, Financial, & Contractual Assistance:

- Pre-qualified Energy Services Companies
- Vetted Master Contract
- Site-Specific RFP & Contract Templates
- Open Book Pricing, Maximum Markups
- Competitive Bidding of Trade Work & Equipment
- Measurement & Verification Guidelines
- State review of Annual M&V Report

Clearly Defined Project Development Process



Process Step	Activity	Typical Duration	Milestone
1 – Opportunity Assessment	Meetings with COMM to review GESP, B3 data, facility needs, issues, and goals	1 – 3 months	Joint Powers Agreement
2 – Define Project Goals	Energy Savings; GHG Emission Reduction; Renewable Portfolio; Building Public Disclosure; Job Creation	1 – 3 months	Issue Site-Specific RFP
3 – ESCO Selection	RFP evaluation and ESCO selection	1 – 3 months	Issue Work Order Contract
4 – Project Development	Perform Investment Grade Audit to develop project scope, cost, savings and funding	3 – 6 months	Issue Work Order Contract Amendment
5 – Project Implementation	Installation of Energy Conservation Measures	6 – 12 months	Certification of Final Completion and Acceptance
6 – Performance Period	Review Measurement & Verification Reports	5 – 25 years (on-going)	Annual M&V Report

GESP & Solar



GESP is a contracting and financing mechanism to implement solar on public buildings

- **GESP provides technical assistance**
- **GESP allows 25 year maximum financing term**
- **GESP allows bundling of short-term payback upgrades to help finance solar**

How to get started with GESP



- **Start Opportunity Assessment:**
 - List facility goals, needs, and issues
 - Comfort issues? Recurring damage? Energy Goals?
 - List buildings and their annual utility costs
 - List potential upgrades
- Call CERTs to talk about the starting opportunity assessment & ask questions
- Include your Management and Facility Staff
- Call Department of Commerce, GESP Staff

Division of Energy Resources & CERTS Contacts

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651-539-1850

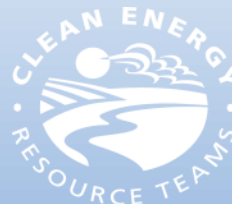
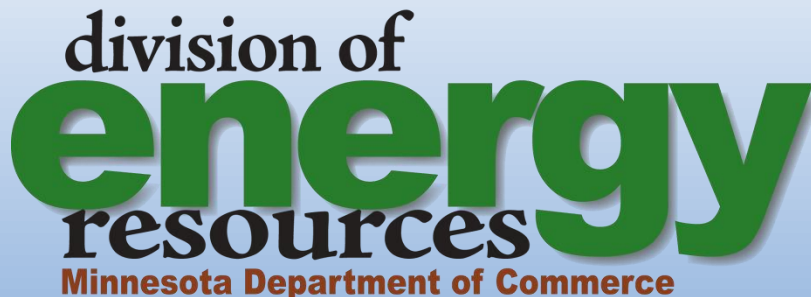
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