

# *GESPC Boot Camp: Foundations and Fundamentals of GESPC*



August 21, 2019

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# Our Collective Purpose



Our time together will afford us to walk through some fundamentals that can help make projects successful, touch on particular areas that have created challenges for some and offer some potential remedies in order to advance the opportunity for GESPC to become a *Business As Usual* resource.



# The reason behind the "g" in GESPC



## What's in a name?

### The reason behind the "g" in GESPC

For nearly three decades the energy efficiency, paid for by savings projects have suffered a bit of an identity crisis.

A collection of some of the more well-known names for these projects includes: (but can't possibly be limited to)

EPC = Energy Performance Contract

ESA = Energy Services Agreement

ESPC = Energy Savings Performance Contract OR Energy Services Performance Contract

GESA = Guaranteed Energy Savings Agreement

GESPC = Guaranteed Energy Savings Performance Contract

MESA = Managed Energy Services Agreement

PC = Performance Contract

SAAS = Savings as a Service

SSA = Shared Savings Agreement

Why all the fuss over a name? Turns out that many of the above agreements differ significantly in the contractual details that bound the concept of the paid for by savings project.

# What is GESPC?



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

-United States Department of Energy

If you are an engineer with a law degree trained in the rules of procurement, construction management and negotiation, with a minor in finance and accounting, this will be a cinch!!

# What is GESPC?



Performance contracting is a means of raising money for investments in energy efficiency that is based on future savings. It enables money that will be saved as a result of the introduction of a new energy-efficient technology to be used to offset the cost of financing, installing, maintaining and operating that technology. By definition, the future savings must be greater than the costs.

- International Institute for Sustainable Development

A repurposing of utility dollars to fix stuff, save energy and water and create jobs.

-Public Domain

# What is GESPC?



A legislatively empowered, budget neutral means of procurement that repays the original investment from the savings which are guaranteed to accrue from project results.

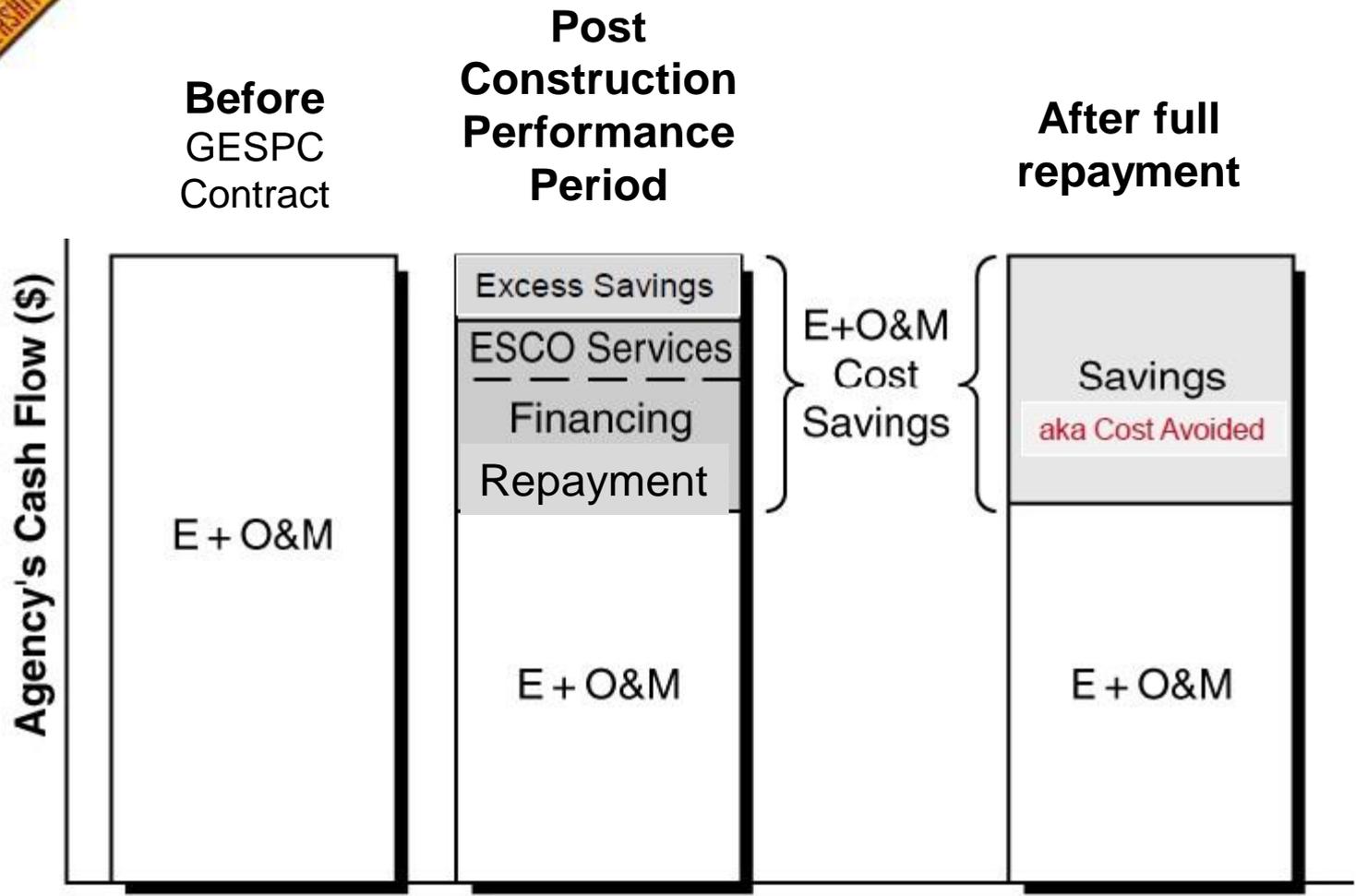
-Public Domain

*A debt free modernization of public facilities and system infrastructure by a single source provider built to or in excess of site specific standards, following processes and industry best practices at a reasonable price and profit with a guarantee of performance.*

- This author



# Where the Money Comes From (a static perspective with no change in utility rate)



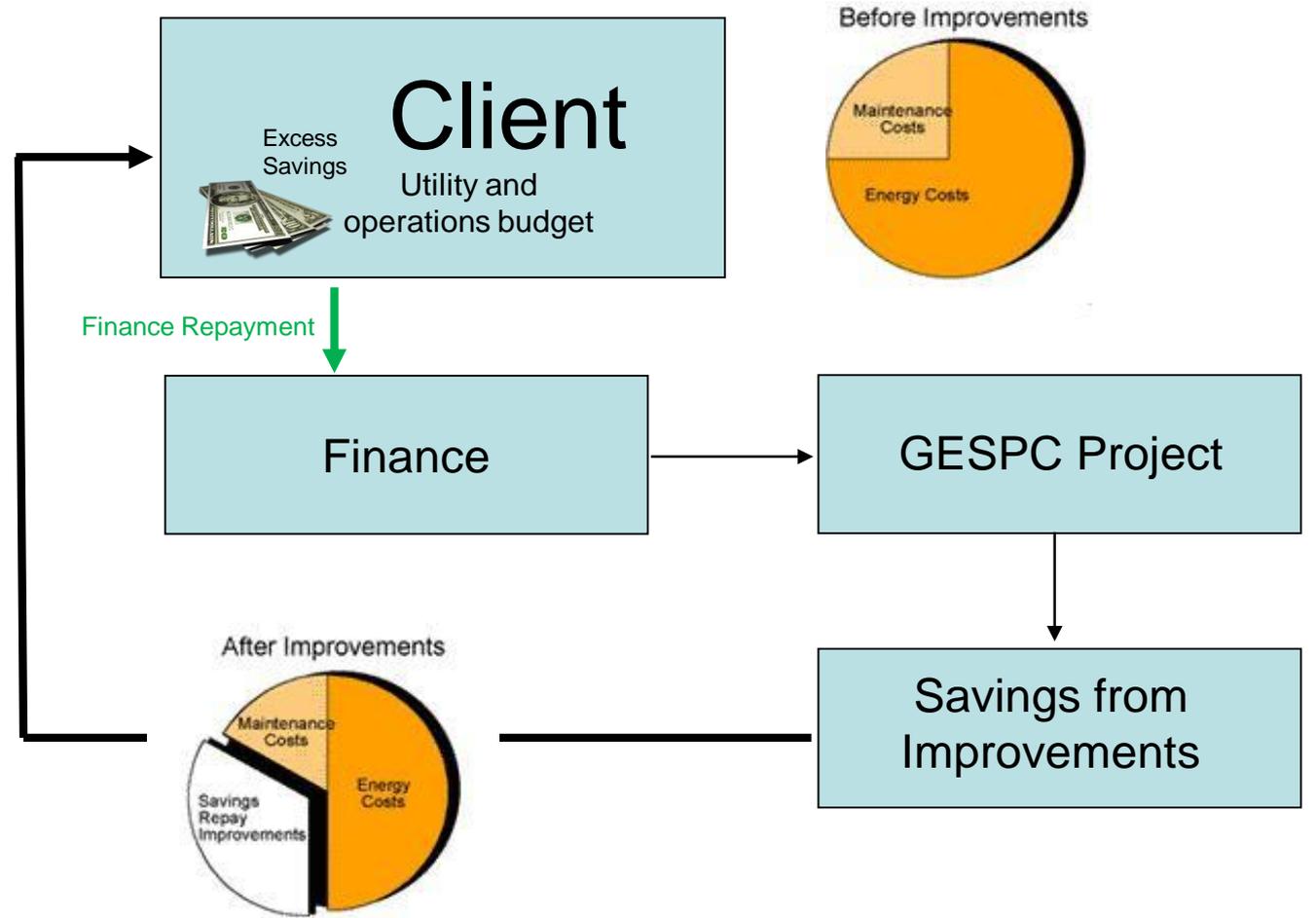
# More Foundational Elements



- GESPC Projects are comprehensive. Short payback measures help pay for longer payback measures. Still, don't exceed the measures life expectancy.
- Generally speaking, ESCOs pursue projects that are likely to exceed \$1M or so in investment. See ESC's [Benefits Estimator](#) to get a sense for project opportunity size.

<b>Benefits Estimator</b>		
How many Square Feet are being Considered?	350,000	
My total Annual Utility bills are	\$ 400,000	
Your Operating \$/sq ft is	\$ 1.14	
What Financial Interest Rate do you anticipate?	4.25%	
How many years do you want to finance this project?	20	
A payment will be made every	12 Months	
Typical Project Savings = 22-27%, Input <b>your</b> anticipated per cent of savings	24%	
Your Annual Savings Opportunity is	\$ 96,000	
Your Estimated Project size is	\$ 1,276,259	
Your total \$/sq ft of estimated project size is	\$3.65	

# How Does the Money Flow?





# Assembling a GESPC Team

## APPROVING AUTHORITIES

You need these folk fully bought in and supportive of the rigor the team will provide to help mitigate risk and see that you get what you set out to achieve

## OVERSIGHT

This role is becoming far more common. Provide experience, insight and education along every step of the way

## CONSTRUCTION

Require that these projects meet or exceed your quality standards and BAU documentation and process. Assist with witnessing, approvals and invoice review

## MAINTENANCE

Know what's needed, where the challenges are today and what will be required of you in the future to maintain guarantee and savings



## ENERGY FOLK

Typically the ringleader or champion for the concept. Required to help assemble needed resources, tools, topical expertise

## LEGAL

Customize documents, review all ESCO provided input to ensure compliance and avoid contradictions.

## FINANCE

Know how the money moves from operating cost to note repayment and how to manage incentives or other revenues. Commit to full term budgeting

## PROCUREMENT

Ensure a competitive procurement. Generally this is two step; first for prequalified providers and later for each project

# Whose Paper Should I Use?



If you've got standardized GESPC contracts/documents in your state you're way ahead. If you don't, you'll need a source.

From time to time we hear folks ask, “whose state should we look at to copy their standardized agreements?” I’ve come to ask, “which state has the same state constitution and enabling legislation as you do and then you’ll know whose standardized documents to use”.

# Whose Paper Should I Use?



Since that's likely out as an option we'd absolutely point you at the

[ESC standardized document](#) model library.

Documents

- [01 -Request For Proposals To Pre-Qualify ESCO For As-Needed Energy Savings Perform](#)
- [02 - ATTACHMENT A - ESCO Base Contract For As-Needed Energy Savings Performanc](#)
- [03 - Attachment B - Response to this Request for Proposals](#)
  - [03a - Evaluation for ESCO Pre-Qualification](#)
- [04 - ATTACHMENT C - Final ESCO Selection Process](#)
  - [04a - Secondary Evaluation Evaluator Sheet](#)
  - [04b - Secondary Evaluation Scoring Spreadsheet](#)
- [05 - ATTACHMENT D - Enabling Legislation](#)
- [06 - ATTACHMENT E - Enabling Legislation for Local](#)
- [07 - ATTACHMENT F - Investment Grade Audit Contract](#)
- [08 - ATTACHMENT G - Energy Performance Contract](#)
  - [08a - ESPC Appendix / Schedules](#)
- [09- ATTACHMENT H - Financing Solicitation](#)
- [10- ATTACHMENT I - Institution Memorandum of Understanding](#)

# Pre-project Prep

- ✓ Be prepared to assemble 36 months of utility bills

All the utilities that could be affected – this allows you to see what you pay for what you consume when you consume it. The multiple years allow you ensure that oddities or excursions from what would be called normal don't impact your perspective on what you spend. Variables in those years of different uses of the facilities or systems, big construction or changes all should be noted and made available to the ESCO as part of what is typically called a Facility Profile

Electricity, Gas, Propane, Water, Sewer, Steam et al.

Before you go off to the storage facility to find the file cabinets with the old utility bills in it, you might want to contact your utility representatives and see if you can actually get the information that you need in report form. At least then your only looking for the sample bills



# Pre-project Prep

- ✓ Be prepared to assemble samples of utility bills; one from each utility from each year.

If you don't understand your utility bills and how you are charged by the serving utility, now is a great time to dig in.

Some utility bills include not only the consumption of utilities in units, kWh, gallons, therms etc. but maybe demand charges – sort of a surcharge on the fact that sometimes you need a lot of power and the serving utility must have it available for you. Or you may have taxes or riders or other considerations that may not be impacted by efficiency at all. It can prove challenging when someone wants to equate your utility rate with total dollars paid divided by units if your bills include these non-impacted costs.



# Pre-project List

- ✓ Be prepared to provide Technical Facility Profile(s)



**Collect data and background information from Institution** concerning facility operation and energy use for the most recent three years from the effective date of this Contract as follows:

1. Building square footage.
2. Construction data of buildings and major additions including building envelope
3. Occupancy and usage information
4. Description of all energy-consuming or energy-saving equipment used on the premises, as available.
5. Description of energy management procedures utilized on the premises
6. Description of any energy-related improvements made or currently being implemented
7. Description of any changes in the structure of the facility or energy-using or water-using equipment
8. Description of future plans regarding building modifications or equipment modifications and replacements
9. Drawings, as available (may include mechanical, plumbing, electrical, building automation and temperature controls, structural, architectural, modifications and remodels)
10. Original construction submittals and factory data (specifications, pump curves, etc.), as available
11. Operating engineer logs, maintenance work orders, etc., as available
12. Records of maintenance expenditures on energy-using equipment, including service contracts
13. Prior energy audits or studies, if any

# Picking Partners



## Owner's Representative

- When do you need them?
- What will they help with?
- Where can you find them?
- What value can they provide?
- How do you find them?
- How do you pay for them?

# Picking Partners



## Energy Services Company

- How do you select one
  - From paper
  - From interviews
  - From references
  - Understanding markups
  - Diversity / Safety Factors
- What do you get from a Preliminary Energy Audit, walkthrough, back of the envelope effort?

# Picking Partners



## Financier

- How do you select one?
  - From paper?
  - From interviews?
  - From references?
- When do you bring them on board?

# Investment Grade Audits

- Procurement considerations
- Study vs. Proposal?
- Technical Support vs. Readability?
- What's the real value of a pre-project description?
- Who needs a load study anyway?
- Baseline of what?
- Standards of comfort?
- Assessing roles and risk?
  - Rates
  - Maintenance and operations
  - Material changes in use/hours/occupancy



# Investment Grade Audits



- Defining the scope of a measure
- Startup, Commissioning and Measurement and Verification
- Projected savings, guaranteed savings, diversity/safety factors
  - Operation and maintenance savings
  - Future capital cost avoidance
  - If you can't prove it, you can't claim it!
- Measurement and Verification Plan

# Investment Grade Audits



- Accepting a study
- Finally a proposal!
  - Measures included
  - Commissioning Plan
  - M & V Plan
    - Options
    - Term
    - Pricing
    - Who holds risk

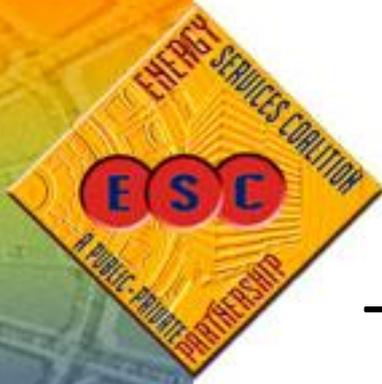
# Investment Grade Audits

(Included in the proposal)

- **Guaranteed Savings**
  - Diversity or Safety Factors
- **Pricing**
  - Firm fixed price
  - Open book pricing
  - Bids
  - Pricing transparency
  - Assessing reasonability
- **Cash Flow Proforma**



# GESPC



Generally:

- Incorporates the IGA
- Provides terms and conditions, administration and events of default, insurance and force majeure
- Provides for an order of precedence
- Defines the purchase of services
- Incorporates a finance agreement
- Defines billing & payment procedures

# GESPC



Generally:

- Non-appropriations clause
- Construction guidance
  - May incorporate a construction contract, its forms and processes
  - Permits
  - Hazardous waste
- Post construction services
- Responsibilities of the parties

# GESPC



Generally:

— Provides for all schedules and exhibits

- **Schedules**

- **Savings Guarantee**

- Schedule A Savings Guarantee
- Schedule B Baseline Energy Consumption; Methodology to Adjust Baseline
- Schedule C Savings Measurement and Verification Plan; Post-Retrofit M&V Plan; Annual M&V Reporting Requirements
- Schedule D-G Left blank for optional schedules

# GESPC



- **Schedules**
- **Payments and Schedule**
  - Schedule H Final Project Cost & Project Cash Flow Analysis
  - Schedule I Financing Agreement and Payment Schedule
  - Schedule J Compensation to ESCO for Annual Services
  - Schedule K Rebates, Incentives and Grants
  - Schedule L-P Left blank for optional schedules

# GESPC



- **Schedules**
- **Design and Construction Phase**
  - Schedule Q Description of Project Site(s)
  - Schedule R Equipment to be Installed by ESCO
  - Schedule S Construction and Installation Schedule
  - Schedule T Systems Start-Up and Commissioning; Operating Parameters of Installed Equipment
  - Schedule U Standards of Comfort
  - Schedule V ESCO's Training Responsibilities
  - Schedule W-AA      Left blank for optional schedules

# GESPC



- **Schedules**

- **Post-Construction**

- Schedule BB ESCO's Maintenance Responsibilities
- Schedule CC Institution's Maintenance Responsibilities
- Schedule DD Facility Maintenance Checklist
- Schedules EE – II           Left blank for optional schedules

- **Administration**

- Schedule JJ Alternative Dispute Resolution Procedures
- Schedule KK – OO           Left blank for optional schedules

- **Optional Schedules**

- Pre-Existing Service Contracts
- Energy Savings Projections
- Facility Changes Checklist
- Current and Known Capital Projects at Facility

# GESPC



- **Exhibits**

- Exhibit I Performance Bond
- Exhibit II Labor and Material Payment Bond *if required*
- Exhibit III (i) Certificate of Acceptance—Investment Grade Audit Report
- Exhibit III (ii) Certificate of Acceptance—Installed Equipment
- Exhibit IV Equipment Warranties

- **Optional Exhibits**

- Manifest of Ownership
- Minority and Woman-Owned Business Certification
- Certification that Financing Term is no Longer than the Aggregated Equipment Lifetime
- Notice of Substantial Completion
- Notice to Proceed with Construction Phase
- Record of Reviews by Institution

# Construction and Implementation



- **Process considerations**

- **Whose process is it?**

- Submittals
    - Notice to Proceed
    - Construction planning and sequencing
    - Gantt charts
    - Construction meetings and minutes
    - Title and ownership of materials
    - Start ups
    - Commissioning
    - Parking
    - Safety and security
    - Title and ownership of materials
    - Training

# Construction and Implementation



- **Process considerations**

- **Whose process is it?**

- Invoicing
- % Complete or work completed
- Documentation
- Substantial completion (by measure)
  - punch lists
  - warranty start
  - shelf stock
- Final completion
- Close out documentation
  - operation and maintenance manuals and checklists
  - Adjustments from Proposal to As-built

# Post Construction Services



- Operations and maintenance
  - Validating performance
- Reporting material changes
- Warranty support
- Post construction m & v
- Annual m & v reports
  - Routine baseline adjustments
  - Non-routine baseline adjustments
  - Reconciling to utility bills

# Record, report and archive

## What to save?

- All of it!
  - RFP and response
  - Contracts; Base, IGA, GESPC
    - Spreadsheets, witness reports, meeting minutes, checklists, commissioning reports, communication – all decisions
- Where do you put it?



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eProjectBuilder



# Where to get help!

Your portal for technical assistance!

<http://forums.energyservicescoalition.org/>



Forum

Blog

Guidelines

## Welcome to the GESPC Online Community!!!

We're really glad you're here. We're even happier that you want to share your thoughts, experiences, concerns, solutions and successes with us, and the rest of our community. This community is comprised of public sector employees with a wide variety, and level, of experiences with Guaranteed Energy Savings Performance Contracting. [The Guidelines](#) are offered to help you and the rest of community get the most benefit out of your participation in the GESPC Online Community.

### In Short:

- Be a good community member: Interact, connect, comment, and ask questions. Above all else, please treat each member with respect at all times.
- Stay on topic: It is the goal of this community to provide a unique forum to share experiences with the GESPC process, and address and overcome challenges that may impede the uptake of GESPC for potential end-users. We ask that our members keep their comments focused and on topic, according to each post or thread. This helps facilitate the best, most productive conversations.
- Know the rules: Your participation on the GESPC Online Community is subject to the [Guidelines outlined here](#). If you don't follow the rules -- you risk having your account privileges being suspended.

### Instructions for use:

- Select any one of the Forums below by simply clicking on it's topic
  - That gives you access to any of the threads within the Forum. You may comment or pose questions or create a new thread within that Forum
    - Forums are initiated by email request to [info@energyservicescoalition.org](mailto:info@energyservicescoalition.org)
- Subscribe to receive an email notification of activity within the thread or within the Forum

# *GESPC Boot Camp: Foundations and Fundamentals of GESPC*



# *Thank you!*

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