

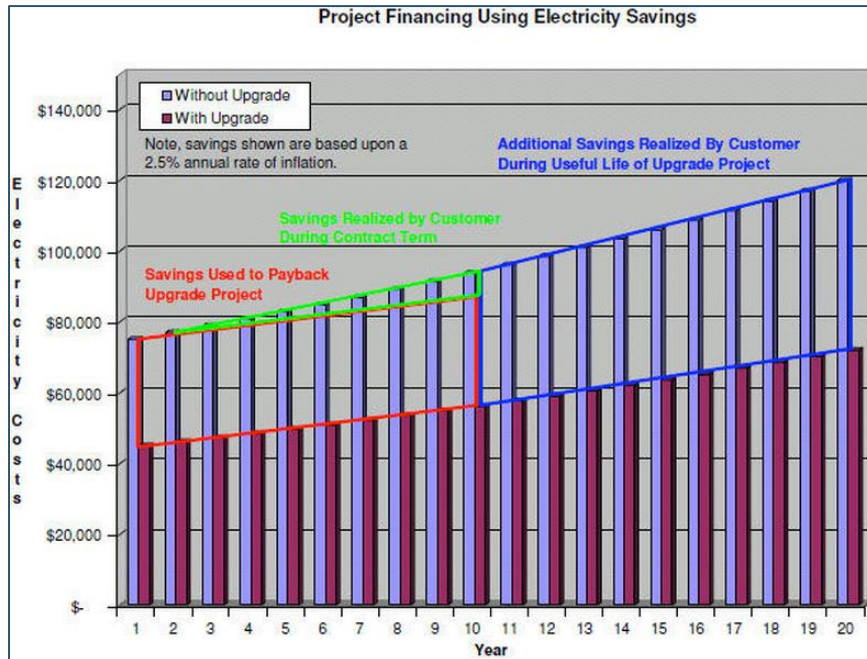
Energy Savings Performance Contracting

Description:

Energy Savings Performance Contracting (ESPC) sometimes also referred to as Utility Energy Service Contracting (UESC) or simply Performance Contracting is mainly a financing mechanism for retrofitting commercial buildings with more efficient technologies (HVAC, lighting, building controls, etc) and, more recently, distributed renewable technologies (solar, ground source heat pumps, etc). The new equipment is paid for over time through the utility bill savings of the measures themselves. “Performance Contract” means that the savings from the performance of the energy investment is committed to repayment of the loan. While this method of financing could be applied in any application, the target market for investors is generally large institutions where risk is low and the investment timeframe is generally longer than in the private sector.

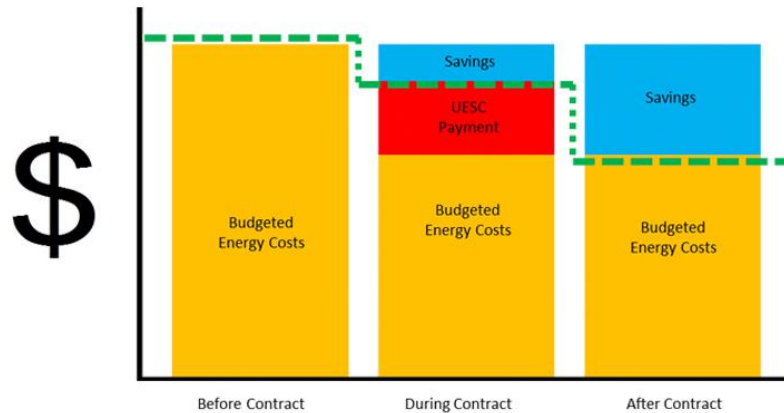
The diagram below depicts a commercial customer’s utility bills over time as a result of an ESPC. In this example, the red box represents the savings that are used to finance the upgrades. The green box is the “extra” savings to the customer (often a buffer against the performance guarantee) during the course of the contract. The blue box represents savings that the customer will incur over the useful life of the project, which is typically long after the performance guarantee has expired. A key component of an ESPC or a UESC is the guarantee: The Energy Service Company (ESCO) guarantees a certain, negotiated level of savings (red box).

ESPCs and UESCs are typically best implemented in the Municipal University State and Hospital (MUSH) market and by Federal Government users. Building owners in these sectors tend to be willing to install measures with longer payback periods and, therefore, the projects tend to generate deeper retrofit savings. ESPC programs are often managed by State Energy Offices for in-state MUSH customers and UESC programs are offered by utilities, often regulated utilities.



Source: [Capitol Markets](#)

The diagram below is a similar representation of how an ESPC/UESC is financed and the long term impacts on customer utility bills.



Source: [Southwest Gas UESC Program](#)

Discussion of the Policy:

Availability of private sector funding for ESPCs and UESCs is not generally a barrier - there is sufficient capital waiting to lend to quality projects. Perhaps the biggest barrier, at least for new programs to launch, is statutory and executive clarity that State agencies can retain the savings generated from a project without being allocated a lower utility bill budget in later years. In some states, ambiguity surrounding this issue has caused some states with enabling ESPC statutes to struggle with launching a program. For example, Arkansas Governor Beebe issued an Executive Order in 2007 calling for ESPCs in state infrastructure, which was later codified in statute in 2009. In 2013 he signed legislation clarifying that state agencies may retain savings from an ESPC. This statutory clarity is key to a successful program.

Financing may be required by the state to sufficiently staff a robust program. While the staffing needs are not expansive, the commitment of personnel to assist in the implementation of a good EPC program is essential.

First of all, contracts are very technical and usually beyond the scope of facilities managers. Engineering consultants to assist facilities managers and represent their interests is a critical component of a successful program. While some of these costs can be rolled into a contract, the administrative burden and upfront costs are generally covered by the state.

Furthermore, states should see a good EPC program as a public resource - not limited simply to state owned facilities, but rather a tool for local governments, school districts and universities. This requires staffing, management and marketing resources that a state program may provide.

Finally, a performance contract starts first with an investment grade audit. These audits can be very expensive. The costs of the audits can be incorporated into an EPC, but the upfront costs may need to be provided by the state (some ESCOs may provide the audit free of charge in certain circumstances). A revolving fund for financing audits may be a policy component states will want to consider.

The investment audit will identify a range of investments and their payback from energy savings. There will be a tendency to want to cherry pick the highest payback items and do just those. A performance contract should really consider the investment as a whole - some retrofits will subsidize others to create a product package that will pay for itself in savings. In this way, the facility can avoid expensive future replacements of energy equipment that are not included in a performance contract, but perhaps have a lower payback threshold than other investments.

A state may want to set a goal, for example, reducing energy usage in state buildings by 20% by a certain date, and specify that the goal is tied to performance contract audits for all state buildings. Or, a state may want to

specify that all school districts need to perform performance contract audits on all of their school buildings - and tie that directive to the state's performance contracting program.

Example State Programs:

Energy Services Coalition - Race to the Top Performance Contracting Impacts - State Comparison

Energy Services Coalition - Race to the Top						
State	Population	Performance Contracting	Dollars per Capita	Job Years Created	Source Energy Saved	Tons Carbon Avoided
Submit Query	Submit Query	Submit Query	Submit Query	Submit Query	Submit Query	Submit Query
Hawaii	1,360,301	\$435,512,722.00	\$320.16	4,734	3,613,884	62,076
Kentucky	4,339,367	\$750,000,000.00	\$172.84	8,152	6,223,500	106,901
Delaware	897,934	\$138,707,463.00	\$154.47	1,508	1,150,994	19,771
Ohio	11,536,504	\$1,252,683,627.00	\$108.58	13,616	10,394,769	178,551
Kansas	2,853,118	\$278,951,861.00	\$97.77	3,032	2,314,742	39,760
Colorado	5,029,196	\$486,900,000.00	\$96.81	5,292	4,040,296	69,400
Mississippi	2,967,297	\$260,725,503.00	\$87.87	2,834	2,163,500	37,162
Idaho	1,567,582	\$129,000,000.00	\$82.29	1,402	1,070,442	18,387
Massachusetts	6,547,629	\$457,696,106.00	\$69.90	4,975	3,797,962	65,238
Utah	2,763,885	\$165,195,000.00	\$59.77	1,796	1,370,788	23,546

Source: <http://www.energyservicescoalition.org/espc/table>

Model state ESPC Programs for the MUSH market:

- State of Hawaii:
<http://energy.hawaii.gov/energy-performance-contracting>
- State of Colorado:
<http://www.colorado.gov/cs/Satellite/GovEnergyOffice/CBON/1251599983018>
- State of Kansas:
<http://www.kcc.state.ks.us/energy/fcip/>

Key Components:

- Established state program manager - typically a State Energy Office representative.
- Clear legislative authorization and support from the Governor's Office.
- Dedicated program funding (can be generated through the projects themselves).
- Prequalified ESCO list.
- Model State contracting documents.
- Third party technical assistance for State agency support and ESCO oversight.
- Project results or savings tracking.

More Information:

- Energy Services Coalition (ESC), Ten Best Practices for a Model ESPC Program:
<http://www.energyservicescoalition.org/resources/tools>
- National Conference of State Legislatures, Enabling State Statutes for ESPC:
<http://www.ncsl.org/research/energy/state-energy-savings-performance-contracting.aspx>
- Department of Energy ESPC homepage:
<http://energy.gov/eere/femp/energy-savings-performance-contracts>
- Federal Energy Management Program (Federal technical assistance lead on ESPCs and UESCs):
<http://energy.gov/eere/femp/about-federal-energy-management-program>