



EPC's for Ireland: Can it
happen?

My Business Focus



Strategic Consultancy



Energy Training



Verification Support



ISO 50001 Support

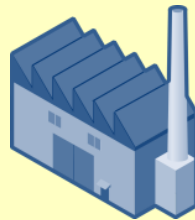
Professional Independent Advice

Energy Performance Contract



“A Contract between two parties where payment is based on achieving specified results such as reductions in energy costs or payback of an investment within a stated period”

Definition IPMVP Vol. 1: 2012

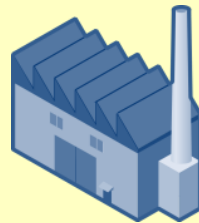


Energy Services Company (ESCO)

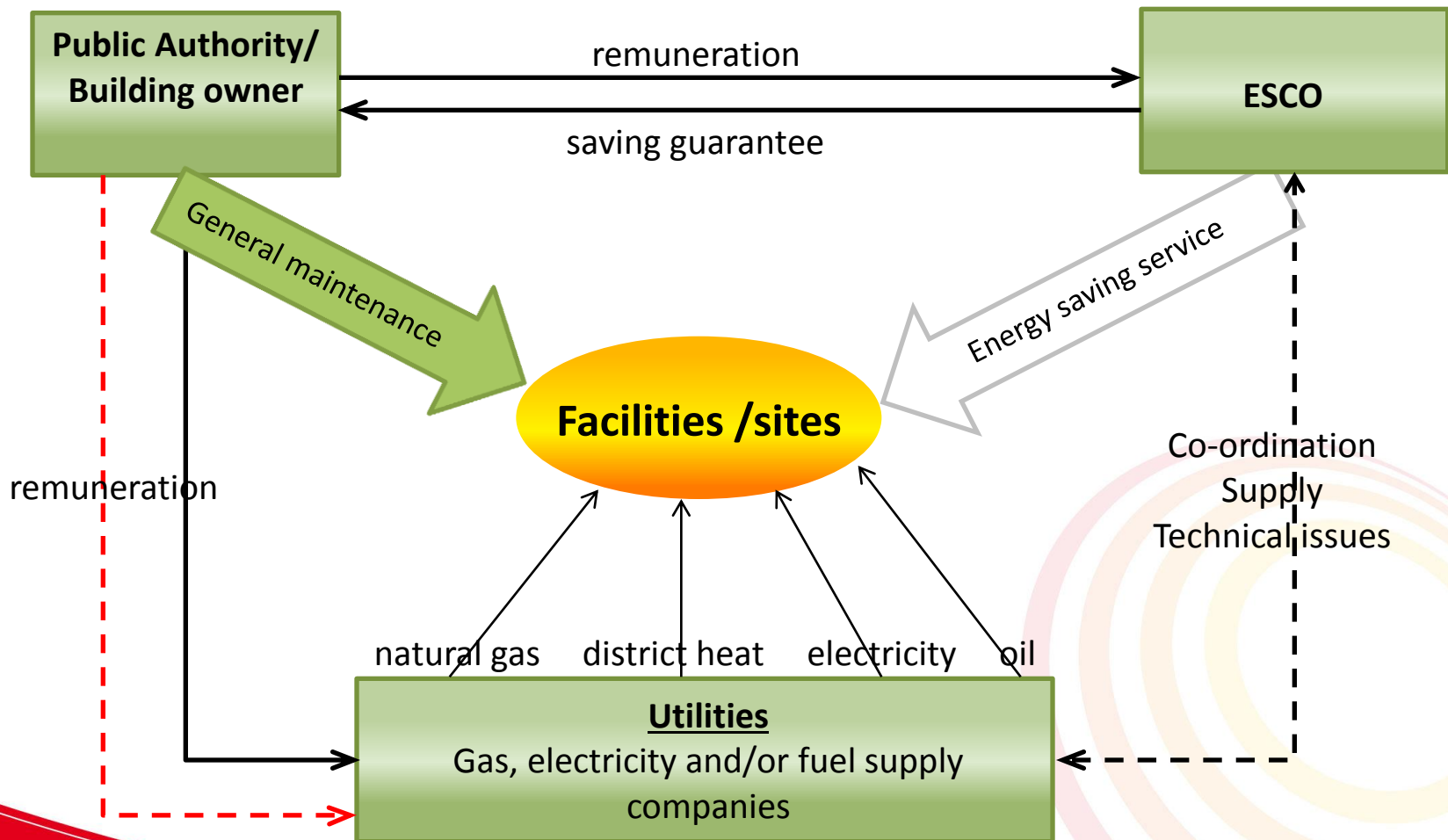


“A firm which provides services of design and construction of energy conservation measures, (ECM’s) under an energy performance contracts”

Definition IPMVP Vol. 1: 2012



EPC Structure



EPC & Job Creation



- **UNEP 2011 - Up to 3.5 million jobs EU & USA through energy efficiency and building projects**
- **France - Minister for Ecology and Sustainability**
 - **€1 million = 14.2 jobs**
 - **€60 billion = 850,000 jobs year**



EPC Drivers



- **Cost Savings**
- **CSR**
- **Renewable energy Directive 2009/28**
 - 16% of energy from renewables by 2020**
- **NREAP – 33%**
- **Energy performance of building directive**
- **The Energies Efficiency and Energy Services Directive**
- **Water Framework Directive**
- **ISO 50001**
- **Obligated Parties VA**

Typical methods of payment



- Shared Savings
 - Documented savings are shared
- Guaranteed Savings
 - Periodic reconciliation against a guarantee
- Chauffage
 - Pay as you use; cost per kWh, cost for m³, cost per hour of light
- If payment is based on savings then you need to be sure the savings were actually realised

Challenges and Barriers



- Lack of Financial imperatives
- Access to finance
- Transaction costs
- Lack of actual technical data
- Mistrust of the ESCO Market
- Mistrust by ESCO of Market
- Lack of technical skills
- Procurement fears – Public sector
- Landlord/ Tenant



Measured Savings



Measure Savings ?



Measurement & Verification



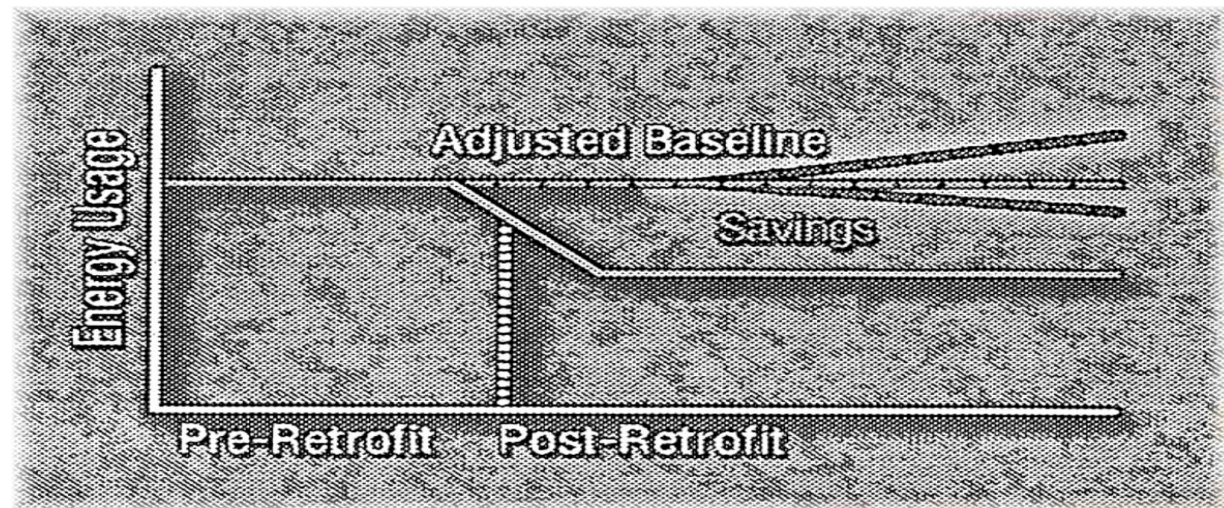
- The process of using measurements to reliably determine actual *savings* created within an individual facility by an *energy* management program. (IPMVP Vol. 1: 2012)



Baseline



- Your savings need to be measured against something
 - You cannot measure savings, you cannot measure something that does not exist
- Understanding your baseline, what affects your baseline, quantification and documenting this is very important



In an Energy Performance Contract



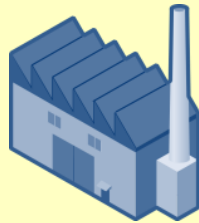
- M&V is the mechanism of deciding if energy savings were actually delivered (or not) **(The Engineers job)**
- The contract decides what happens if savings delivered, (or not) **(The Lawyers job)**

M & V?

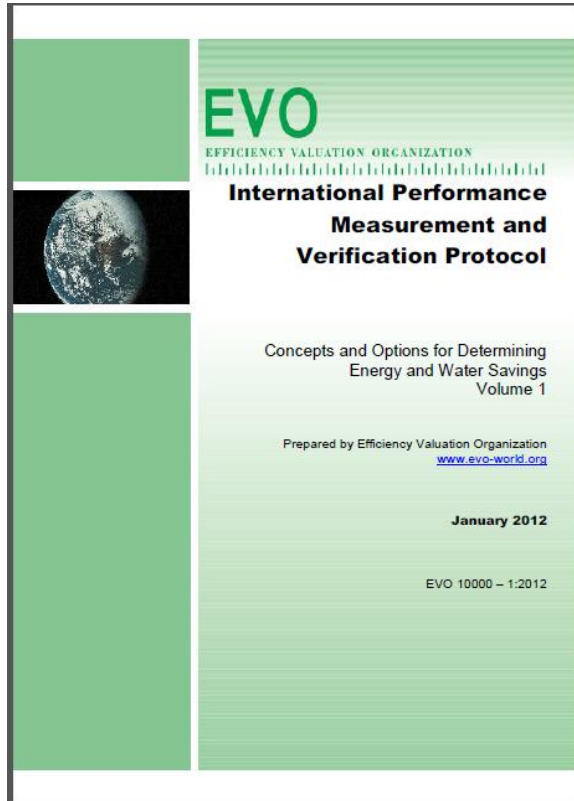


Balancing Uncertainty

Are those savings
figures real?



International Performance Measurement & Verification Protocol



- Independently developed by the experts in the sector.
- Supported and developed by EVO, a voluntary organisation
- Worldwide recognition
- Updated in 2012
- Available via www.evo.org

Efficiency Valuation Organisation

- **EVO Vision**

- A global marketplace that correctly values the efficient use of natural resources and utilizes end use efficiency options as a viable alternative to supply options



- **EVO Mission**

- To develop and promote the use of standardized protocols, methods and tools to quantify and manage the performance risks and benefits associated with end-use energy-efficiency, renewable-energy, and water-efficiency business transactions.

Approach Options



- A: Retrofit Isolation
: Key Parameter Measurement
- B: Retrofit Isolation
: All Parameter Measurement
- C: Utility Bill Comparison
- D: Calibrated Simulation



When to develop M&V Plans



- Verification needs to be planned at the outset
- The M&V Plan is particular to the project
- It is an AGREEMENT between both parties in the case of an EPC
- Plan BEFORE the event (implementation)

CMVP is a Certification and Training Program developed jointly between EVO and the Association of Energy Engineers, AEE, to improve the understanding of this vitally important area of energy management.



**Certified Measurement &
Verification Professional**

- You are NOT REQUIRED to be certified to apply IPMVP
- CMVP is a Certification Program developed jointly between EVO and the Association of Energy Engineers, AEE, to improve the understanding of this vitally important area of energy management.



- A CMVP has proven themselves to understand how the protocol is properly applied to deliver a credible outcome.

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Target Energy is a trading name of IB Target Energy Ltd.