

ESCO activity of Services industriels de Genève (SIG)

Lauréat du

Watt d'Or2013

La distinction pour les meilleures performances énergétiques
sous l'égide de l'Office fédéral de l'énergie



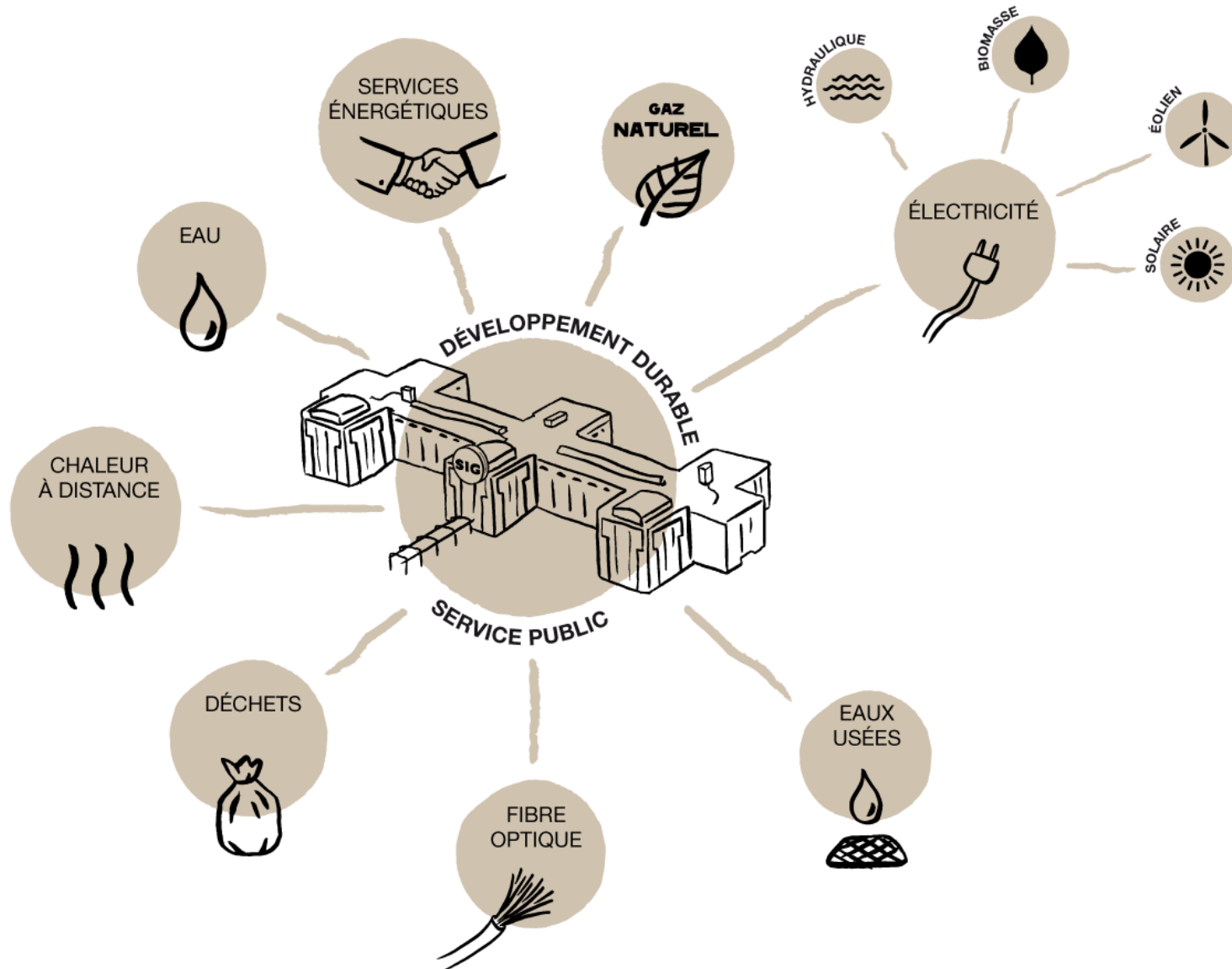
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Office fédéral de l'énergie OFEN

Workshop DSM – 16.10.2013
Jean-Marc Zraggen



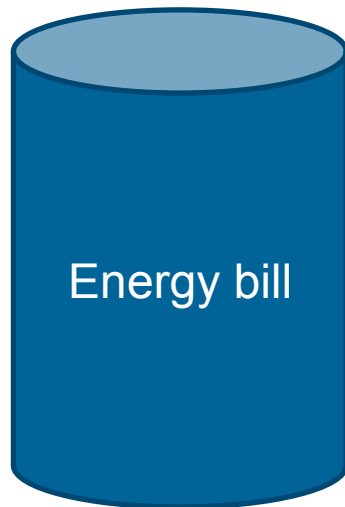
SIG field of activities



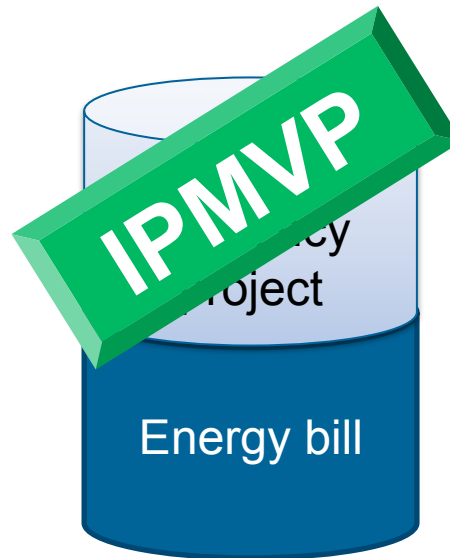
EPC principle



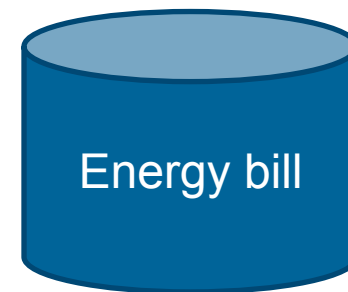
OPEX



Before

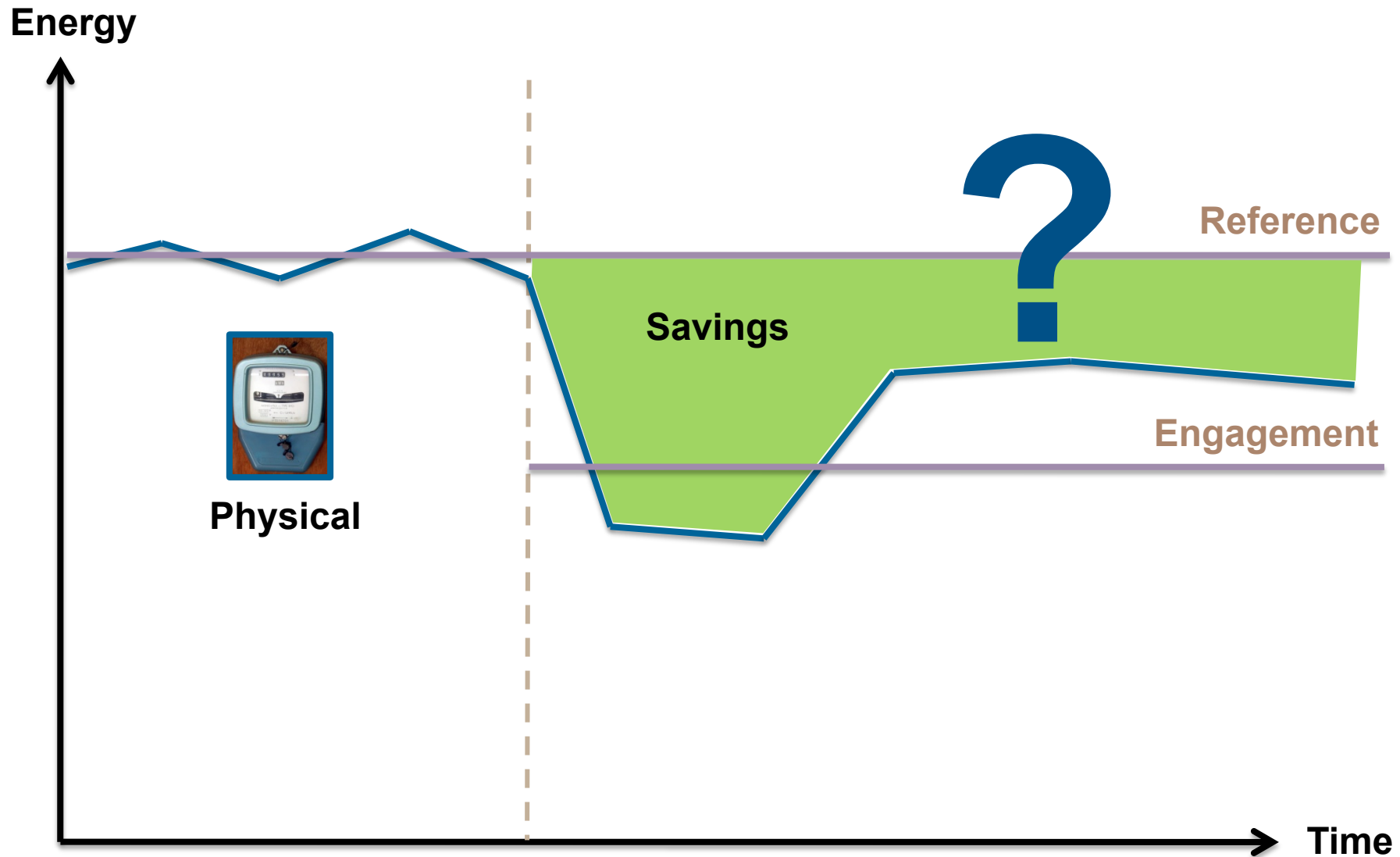


During EPC

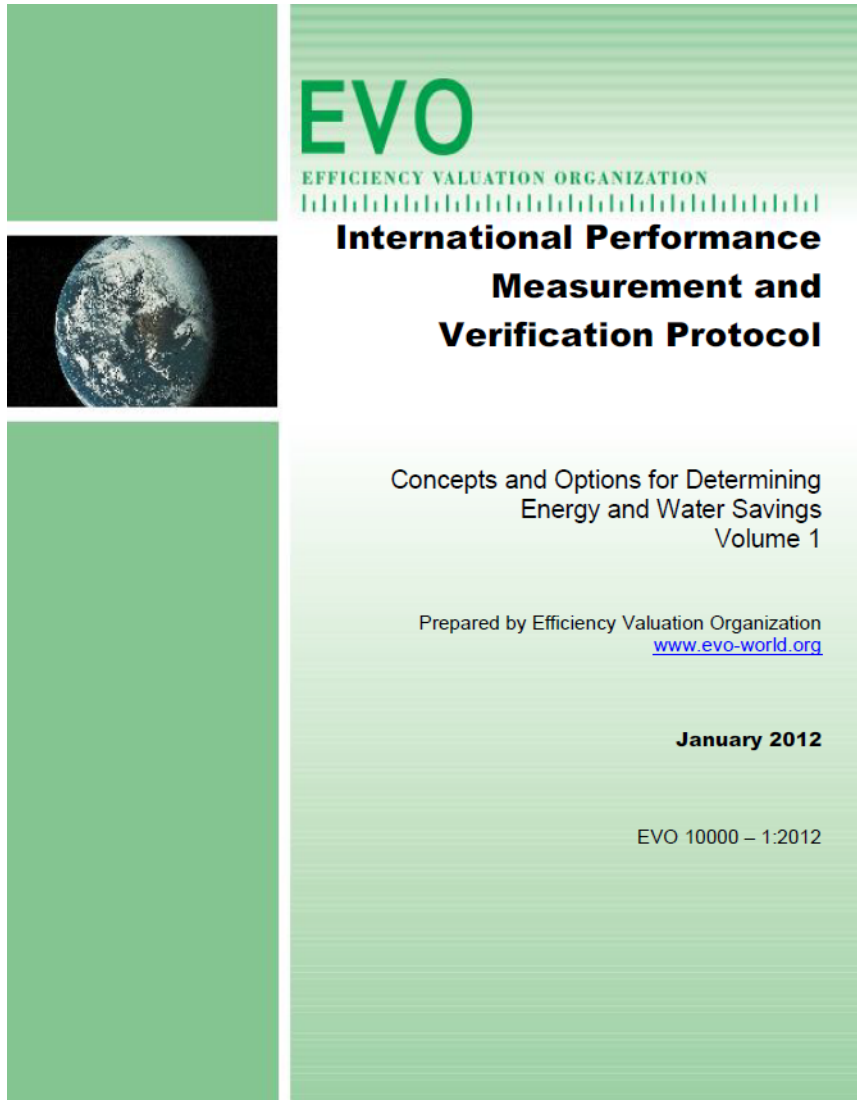


After

« Mesuring » energy savings ?

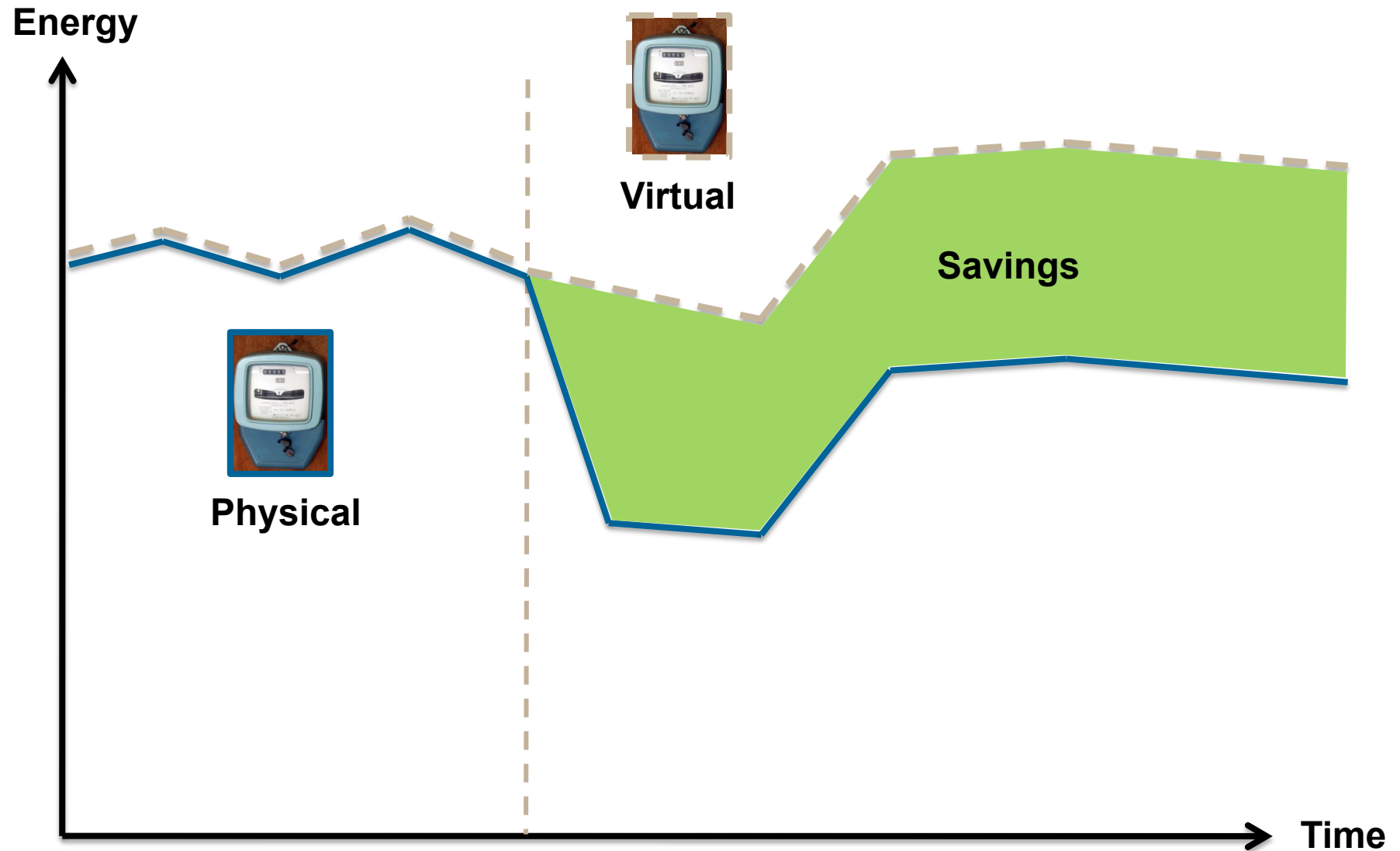


IPMVP protocol by EVO



- ✉ A worldwide recognised protocol for energy savings evaluation
- ✉ Translated in 14 languages
- ✉ SIG is official EVO affiliate for Switzerland
- ✉ www.evo-world.org

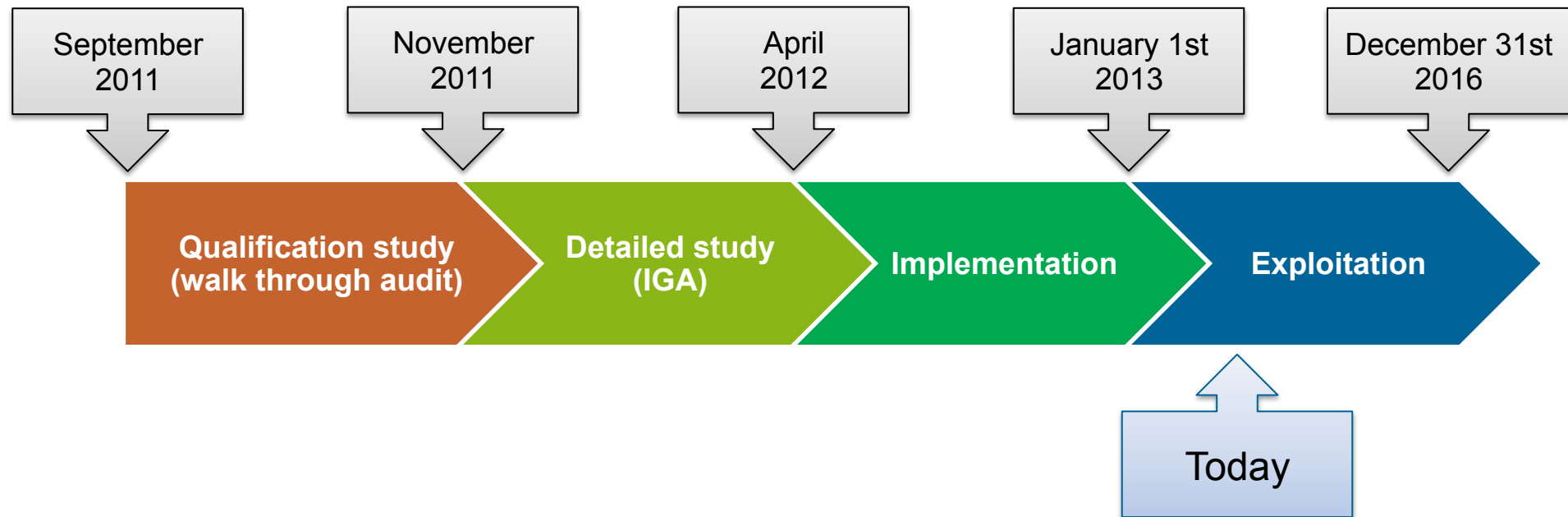
Compare « apples » with « apples »



EPC @ Starling Hotel Geneva



Building of a partnership



12 Energy conservation measures (ECM) on HVAC

▶ Cost of implementation : 404 kCHF (330 k€)

▶ Annual cost of Measurement & Verification of performance (IPMVP) and optimisations: 18 kCHF/an (15 k€/year)

▶ **Estimated savings : 126 kCHF/an (102 k€/year)**

▶ electricity savings -297 MWh/an

▶ heat savings -642 MWh/an

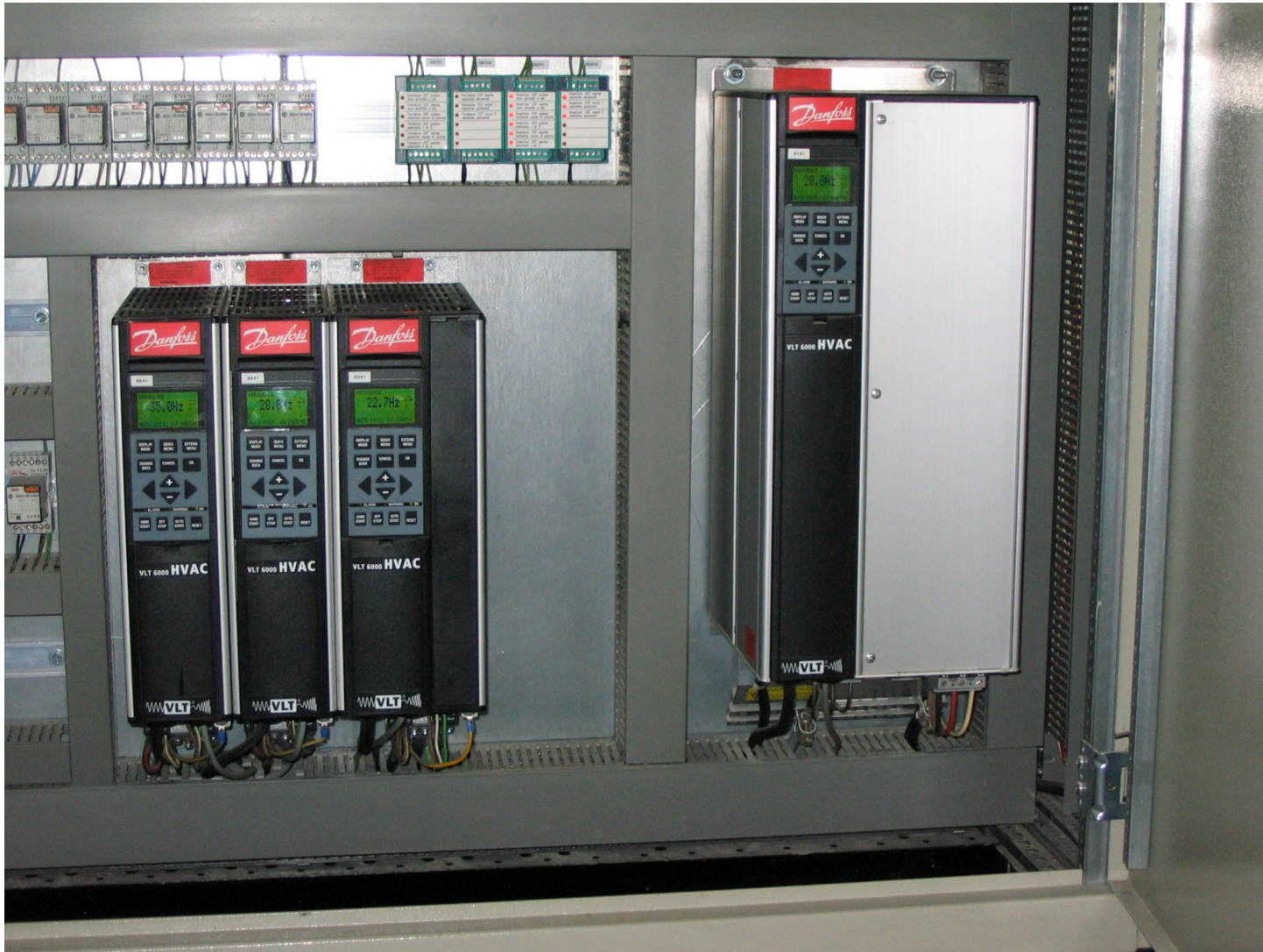
Contractual aspects

- ☞ SIG develops, implements and finances 100% of the project.
- ☞ SIG will receive 100% of the energy savings during 4 years, and not a day more.
- ☞ If the project is paid before the end of the 4 years period, subsequent savings will be shared 50%-50% until the end of the contract.
- ☞ If the project is not paid at the end of the 4 years period, the contract ends anyway and SIG fully assumes the losses.

CO2 probe for demand-based regulation of air handling units



Frequency converter for a fine regulation of air flow



Solar probe for lightning regulation



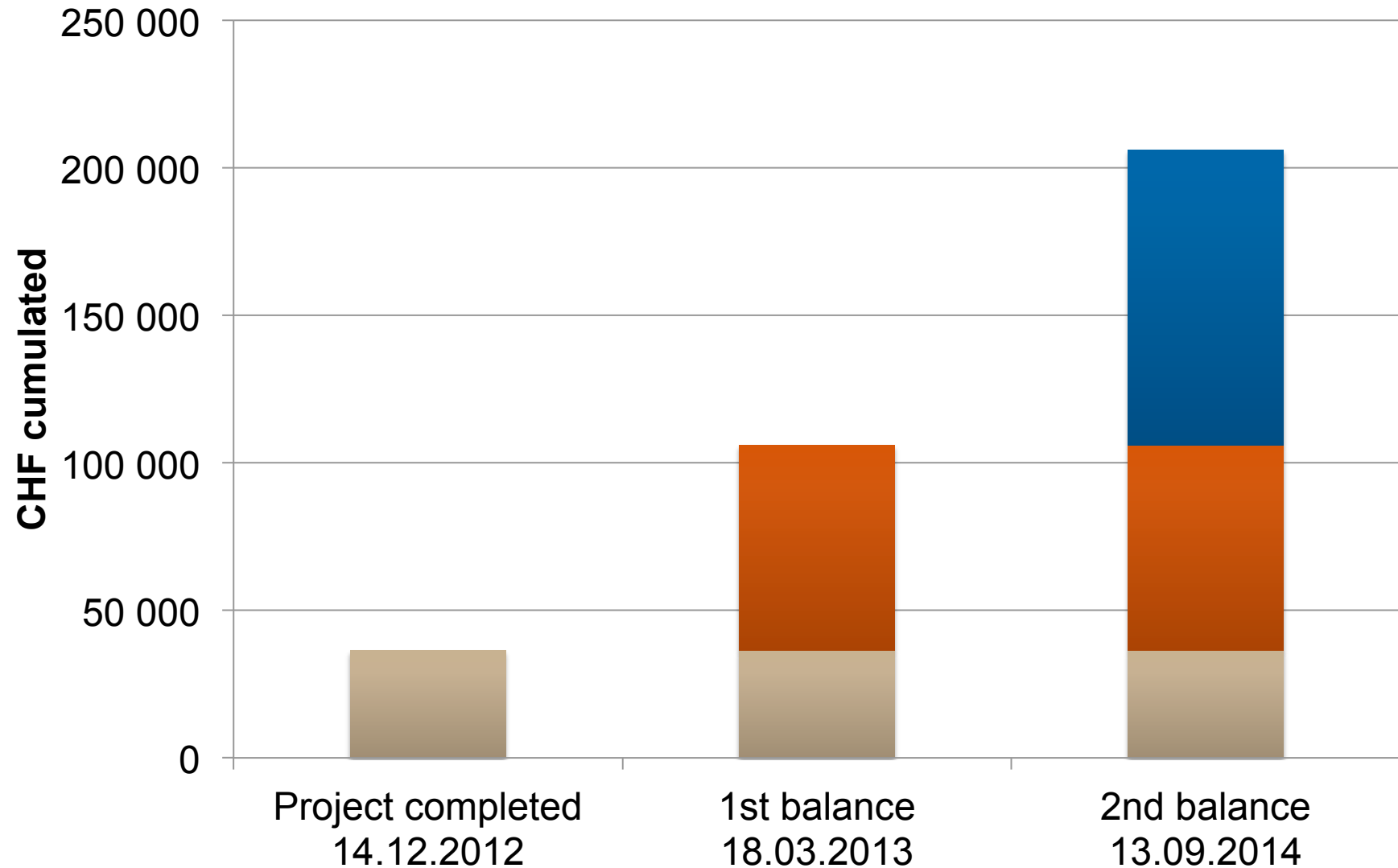
Solar probe for improving chiller regulation



Re-lamping



Energy savings balance



ESC activity at SIG

- ▶ 4 EPC signed + 4 IGA signed
- ▶ 17 projects on the pipe at different stage of development

From the field :

- ▶ EPC ? What are you talking about ?
- ▶ Banks do not (yet ?) value EPC futur cash flow.
- ▶ But, two private funds have been set up (SUSI, UBS)
- ▶ Lots of SME projects that do not fit within EPC scope
- ▶ 99% of SIG EPC projects are shared savings
- ▶ Energy prices are low compared to investment cost

Known ESCO active in Switzerland proposing EPC



SIEMENS

SMI Enerpro



Schneider Electric

COFELY

GDF SVEZ

Johnson Controls



- ☞ The Energy policy 2050 (still on discussion) brings some good incentives to promote the development of ESCO market.
- ☞ Project of a national ESCO association « SwissESCO ».
- ☞ Two private funds ready to invest in energy efficiency projects : SUSI and UBS Swiss energy infrastructure funds.
- ☞ Master's thesis of Idelette Floret (HES) : Proposing a model of public procurement procedures for buying EPC that fits within national regulation and swiss habits & customs.

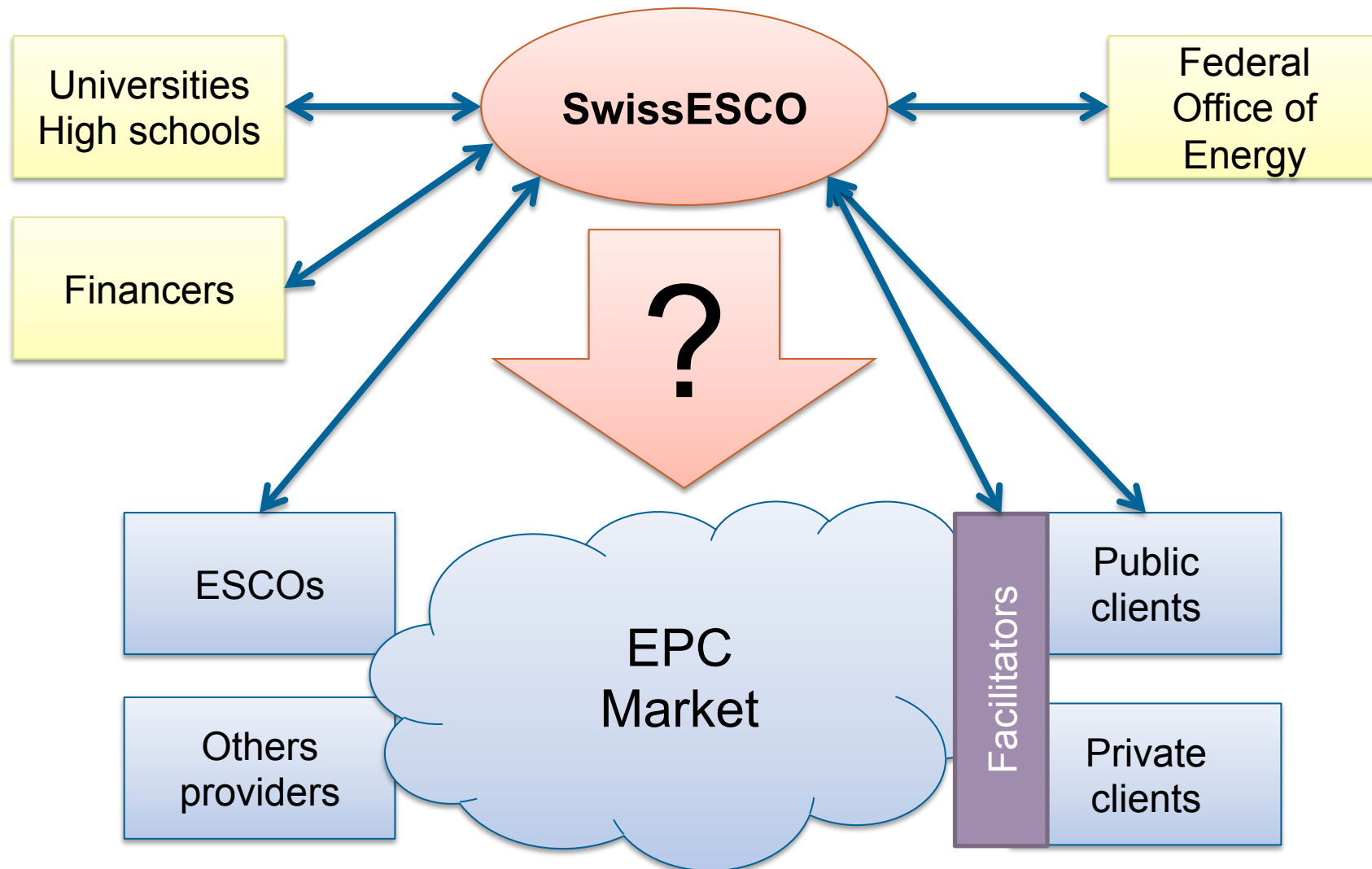
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- 📖 PhD's thesis of Sandra Gogniat (UNINE) : « Energy Service Contracting: An Economic Perspective ».
 - 📖 Already more than 70 people certified IPMVP (CMVP).
 - 📖 An engineering company wishes to position itself as a facilitator on the market (assistant à la maîtrise d'ouvrage) in order to help customer to buy an EPC.
 - 📖 The first ESCO Workshop in Switzerland yesterday !
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ESCO market please ?



National ESCO association « SwissESCO »

Activating ESCO/EPC market

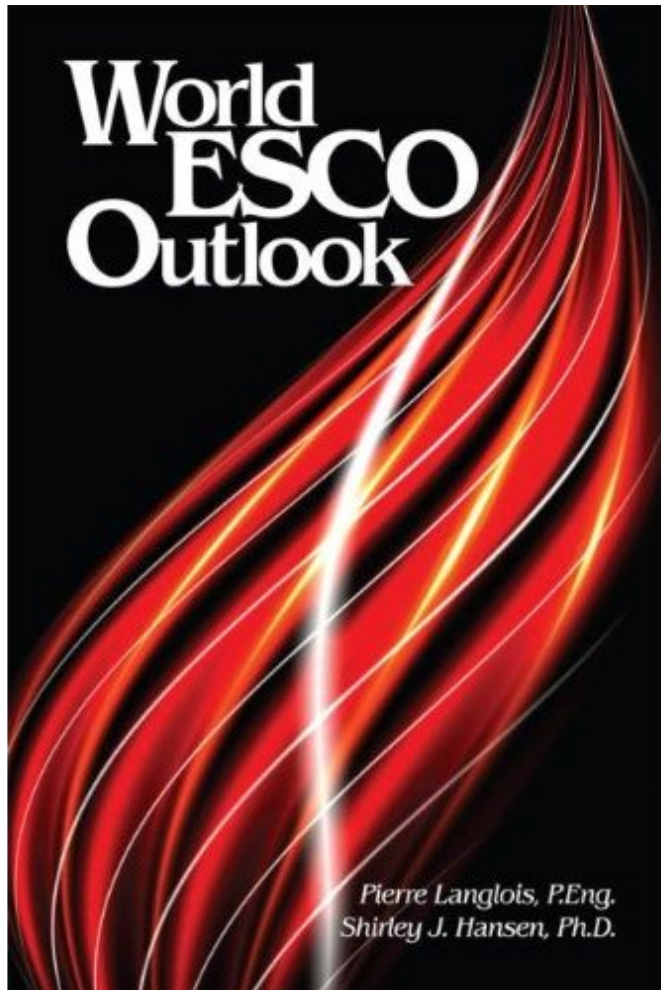


SwissESCO : Main goals



- ☞ To set up a **favorable framework** for the development of swiss ESCO market.
- ☞ **To promote** Energy performance contracting (EPC) and its best practices.
- ☞ **To represent** the interests of its members to official bodies and other associations.
- ☞ To promote **synergies and collaborations** with other associations that share similar goals.
- ☞ **To collect** and aggregate data on ESCO market.

Some references



- 📖 European commission, Joint Research Center (JRC)
<http://iet.jrc.ec.europa.eu/energyefficiency/esco>
- 📖 Programme UE « Change Best »
<http://www.changebest.eu/>
- 📖 European energy service initiative
<http://www.european-energy-service-initiative.net/francais/eu/toolbox/>
- 📖 ClubS2E (France)
<http://www.clubs2e.org/>
- 📖 ESCO Europe event
<http://www.esco-europe.com/>
- 📖 Efficiency Valuation Organization (EVO)
<http://www.evo-world.org/>

*« Energy efficiency
is an investment;
not an expense »*

Thank you for your attention !

