



ATEE-White Certificate Club

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M&V Update



Initial M&V Approach

- SEAI manages and implements
- Upfront M&V approach including calculations to be submitted for evaluation and possible site visit
- Iterative approach taken
- Non-compliant turned away at application

EEOS Quality Overview



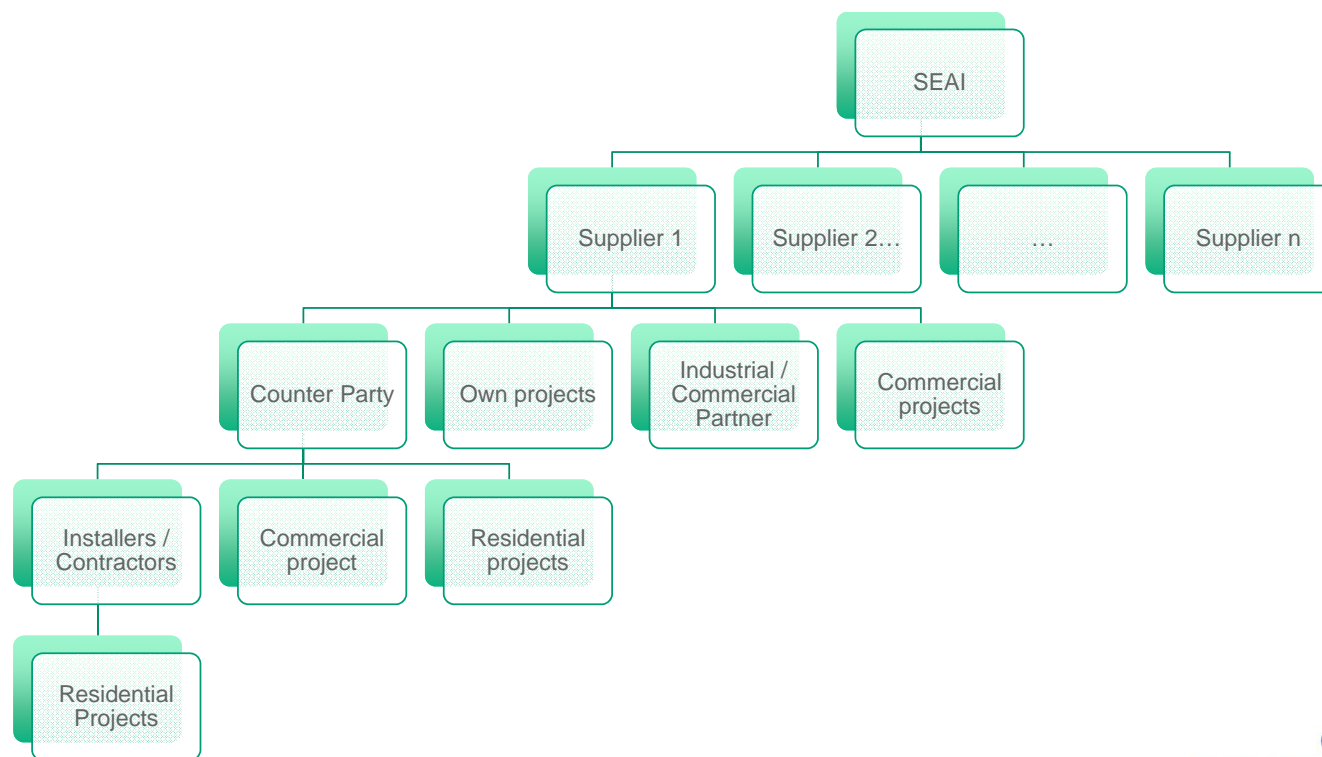
EEOS and Quality Management

- Treat supply of Energy Credits as a product
- Obligated Parties are a supplier of this product to SEAI
- In turn an OP's contractors, partners, own projects etc. are suppliers of energy credits to the OP
- Quality management schemes (e.g. ISO 9001) provide a template for ensuring robustness of the processes involved in product delivery

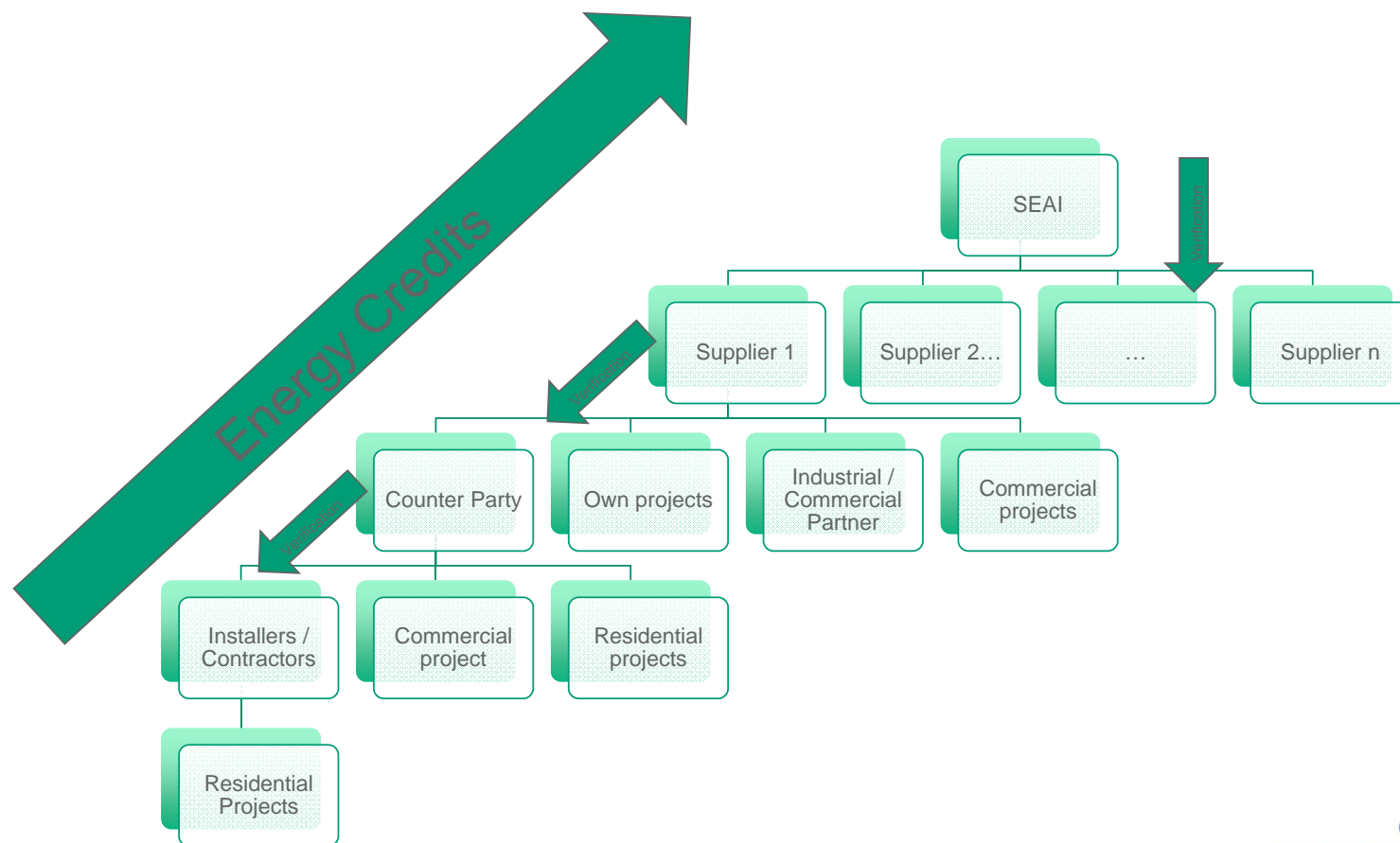
EEOS and Quality Management

- Obligated Parties operate quality systems aligned with ISO 9001 and related to other good practice standards such as ISOs 14001, 50001, 50015, IPMVP etc.
- These certified schemes require **performance to be measured, analysed and continually improved**
- They inform procurement and related processes such as **supplier selection and monitoring**
- And require **quality control** of contractors, commercial partners etc.

EEOS M&V simplified overview



EEOS M&V simplified overview



Measurement and Verification



Residential Sector

- All deemed measures, fixed savings per measure
- Documentary evidence:
 - Pre and post-works photos
 - Commissioning certs, registered installer sign off
 - Signed homeowner declaration of works completed
 - Invoices
- Supplier quality checks
 - Homeowner surveys
 - Physical inspections

Non - Residential Sector

- All saving declarations must be accompanied by an M&V report from an M&V professional using IPMVP or ISO50015 or equivalent
- “Measurement” can be:
 - Metered data (against appropriate benchmarks)
 - Engineering calculations
 - Number of lights / motors
 - Efficiency of new boiler / motor / pump
 - Sum of runtime hours...

Non - Residential Sector

- “Verification” can be:
 - Certified energy auditor sign off
 - Commissioning certs
 - Pre and post-works photos
- But ultimately – we require the signed M&V report
- Supplier quality checks
 - Independent review of M&V reports
 - Physical inspections

Auditing Process



Energy Credit Management System (ECMS)

- All energy efficiency savings are logged to the ECMS database, including measures from SEAI supported programmes
- Each record contains, at a minimum, the following details:
 - Measure description and date
 - Unique identifier (electricity meter number, geo-tag)
 - Address
 - Obligated party, Counterparty, Installer
- ECMS checks each saving uploaded against existing database
- Procedures to deal with conflicts

Audit – Verification process

SEAI audit 5%-10% of all works submitted by obligated parties

- Annual review of Supplier Quality System
- Desktop reviews (document checks, calculation verifications)
- Site inspections

Obligated parties must audit 20% of works done

- must approximate 20% of the obligated party's savings
- must be representative of project types, size, sub-sector and location and risk factors
- Quality system identifies non-conformances and requires remedial actions and preventative measures

Audit – consequences

When non-conformances are found:

- Potential for all credits associated with a “batch” to be suspended or removed
- Failure to rectify issues can result in a portion of all of a supplier’s credits being removed

EEOS Quality system

- Expected that all Suppliers now have a functioning Quality System aligned with the quality framework.
- System audits to commence late Summer 2017
- ISO 90001 style audit
- Official audit report will be generated
- Findings may impact on future energy credit applications

Thank you

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