

**Tracking implementation of audits in
Finland – experiences since 1994**
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Ulla Suomi, Finland



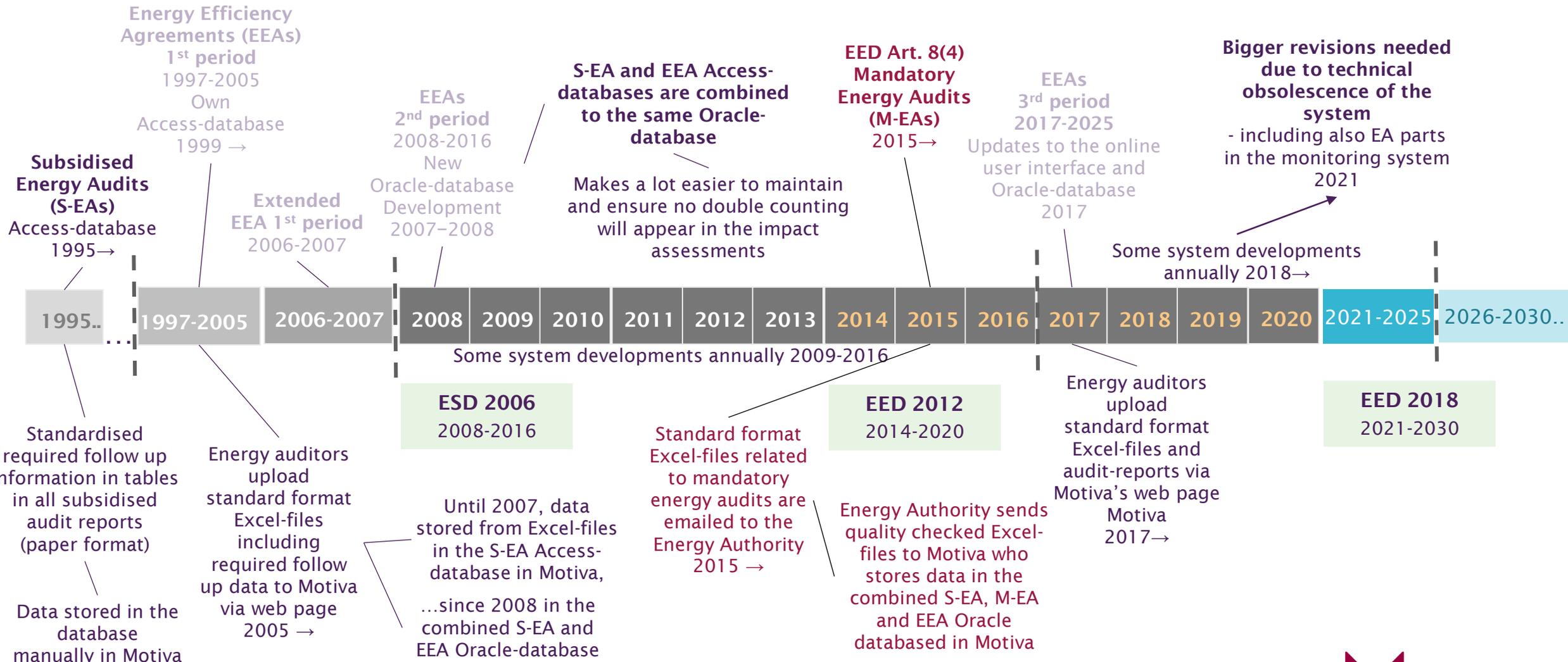


Monitoring and reporting is essential

- **Monitoring system** for subsidised Energy Audit Programme (EA) as well as for voluntary Energy Efficiency Agreement scheme (EEA) **was seen essential from the beginning**
- Well functioning **monitoring system has had a central role to:**
 - **Reveal the results**
 - **Create trust and credibility** to all parties – not only for Government
 - **Get long term top-level commitment** by the Government
 - Subsidised EA programme and EEA scheme have been **part of all national energy and climate policy papers and strategies since they were launched** – EAs already since 1992 and EEAs since 1997
 - Investment subsidies for energy efficiency (EE) measures have been available continuously since 1998
 - **Get recourses** targeted for programme **administration** and continuous maintenance and **development of the monitoring system**
- One success factor – **reporting obligations** were **planned at the same time as the policies**

Long history of tracking energy audits (EA)

Evolution in Finland to monitor impacts of Energy Audits (EAs) 1994 → and Energy Efficiency Agreements (EEAs) 1999 →



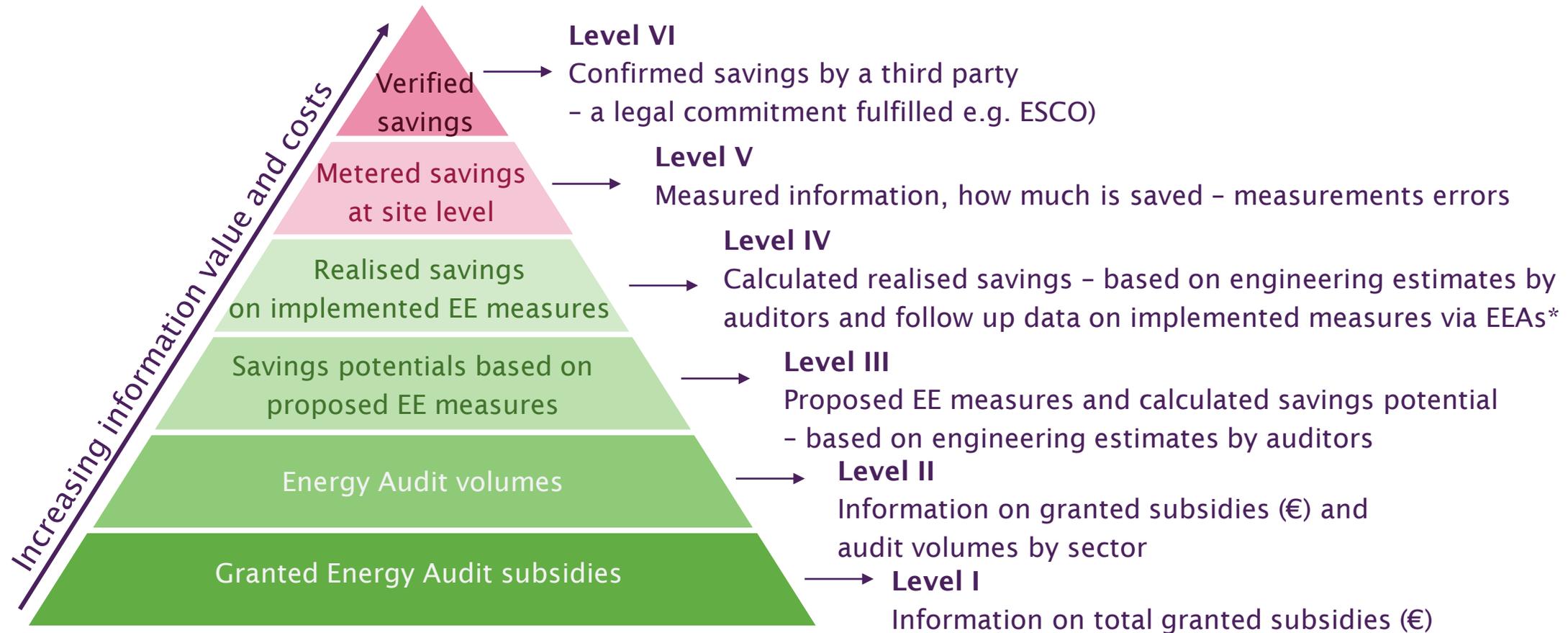
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EA = Energy Audit - Subsidised (S-EA) or Mandatory (M-EA)
EEA = Energy Efficiency Agreement



Different levels of monitoring and evaluation

Energy Audit Programme in Finland – Levels I-IV (1994 →)



* EEA = Energy Efficiency Agreement

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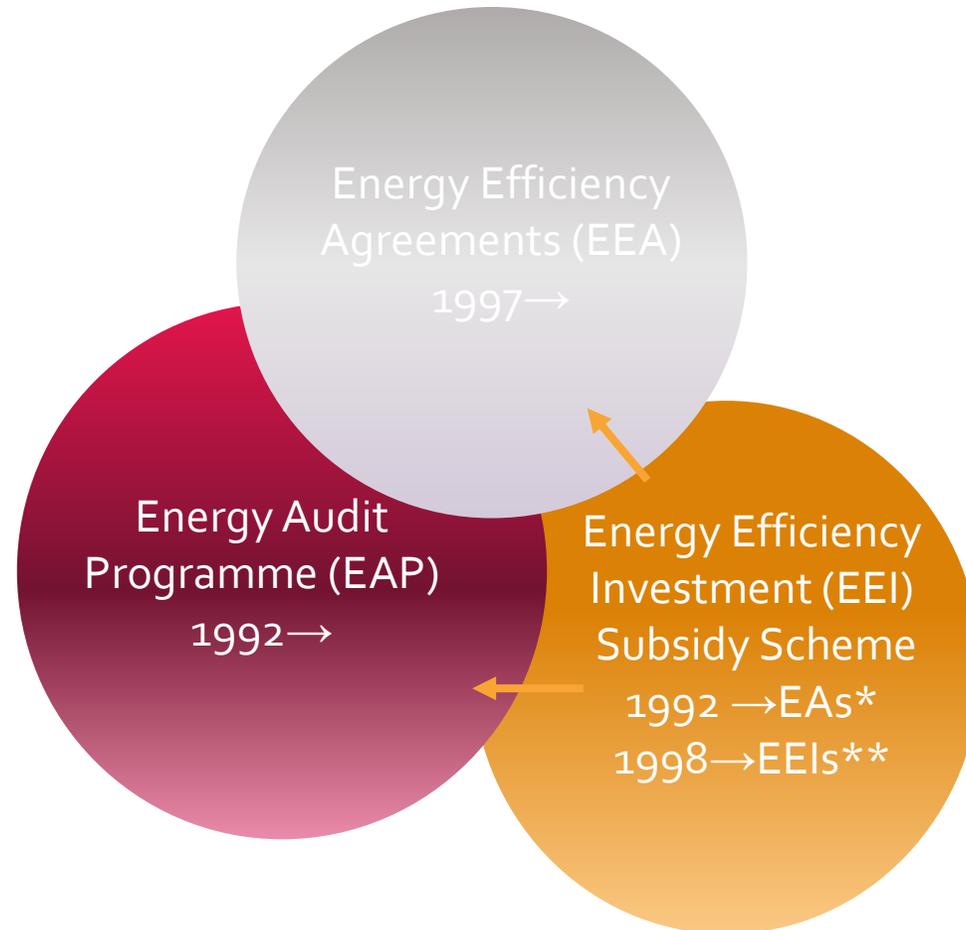
Three instrument 'package'

Double-counting need to be tackled between policy measures

Energy Audits | Energy Efficiency Agreements | Energy subsidies

- Savings from measures proposed in the EAs are excluded in EEA's impact assessments
- EEI subsidy scheme is not assessed as a separate measure at all

* EA = Subsidised Energy Audits
**EEI = Energy Efficiency Investment
EEA = Energy Efficiency Agreement



Information is gathered from all subsidised and mandatory audits

Standardised forms

- **General information** of the building/site, energy and water consumption data
- Similar data monitored from subsidised* and mandatory audits
 - quality assurance processes reveals that required data is reported

In addition, data for each proposed EE measures like:

- short **description/name of the measure**
- **savings** in heating, electricity and water in **energy units** (MWh/a, m³/a)
- **savings** in heating, electricity and water in **terms of costs** (€/a)
- potential **savings in power charges** (€/a)
- **CO₂ emission reduction** (tCO₂/a)
- estimate of **EE investment** (€) and **pay-back time** of the measure (a)
 - whether a **life cycle calculation** is done or not (Yes / No).
- **savings lifetime**
- **status of implementation** (implemented I, decided to be implemented D, under consideration C, not to be implemented N)
 - year for implementation (I and D options)
- **classification** of the measure type
 - heating, cooling, electricity, water, ventilation, structures, process, compressed air

* Subsidised EAs cover industry, public/private services, energy sector



Confidentiality of the data

All data gathered from companies and municipalities is confidential

- Applies all data gathered from Energy Audits or via annual reporting of the Energy Efficiency Agreements

Same rule applied as in the Statistics Finland

- Precondition to publish aggregated data requires enough companies (minimum 3) in an aggregated group to avoid a possibility to identify individual data
- Company/municipality specific data is not given or published without the permission of this party

Monitored data used for several purposes

- Energy Audits have close connection to the implementation of Energy Efficiency Agreements in companies and municipalities
 - Good starting point to fulfil one of the obligations set to joined companies/municipalities to find out possibilities to improve energy efficiency
 - Monitored data gives a possibility to show good examples of EE measures and their results and support companies and municipalities in their EEA implementation
- For communication, supporting and marketing purposes
 - Web page, webinars/seminars, other communication
 - Case examples provided related to good practices in companies and municipalities to promote Energy Audits
 - Sector/building type specific summary data of the results used in marketing and other purposes
- Ex-post and ex-ante impact assessments for several planning/reporting purposes (NEEAP, EED, NECP, PaMs, UNFCCC,..), as well as for national purposes



Be realistic when planning M&V

- How to get reliable data with reasonable costs
 - In planning phase, be careful what and how much data can be gathered from the companies/communities
 - The end-users seldom interested to spend money on monitoring and verification (M&V) above their own needs
 - Best, if all parties accept from the beginning that M&V is essential and one corner stone of the scheme
- Be realistic what can be with reasonable costs and accuracy measured and verified and what not
 - **Plan reporting obligations at the same time as the policy**
 - Consider carefully what is possible to monitor and follow up
 - Small savings cannot be identified from the total consumption
- In practice, there are not always working tools or resources available for all types of policies and measures
- **Prepare to develop the monitoring system**
 - Unfortunately, revision needs due to technical obsolescence of the system will occur sooner than you expected
- **Keep M&V as simple as possible!**



Many thanks!

Ulla Suomi, Motiva Oy, Finland

ulla.suomi@motiva.fi

 @ullasuomi

 /in/ulla-suomi

www.motiva.fi/en