

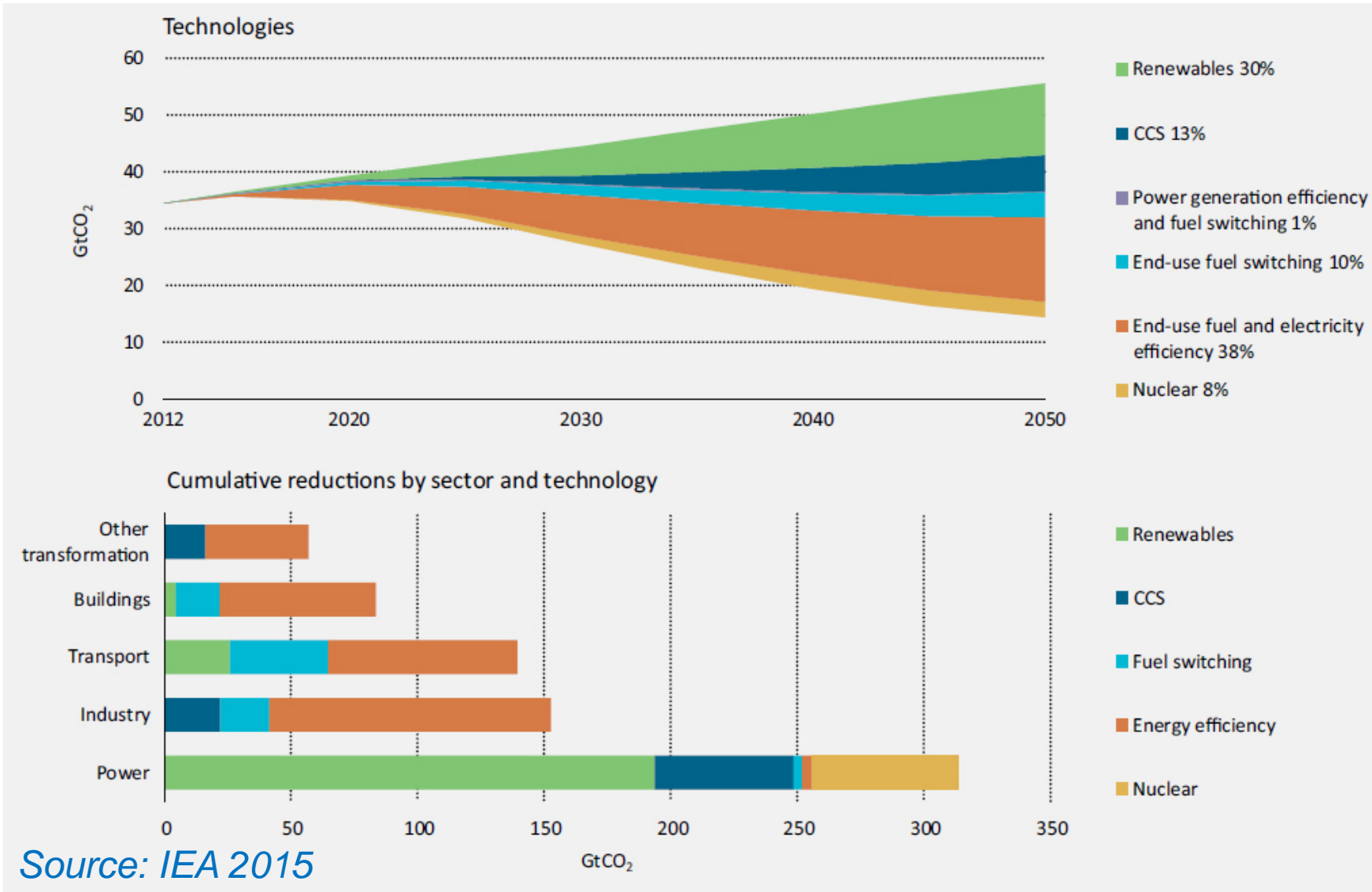
Energy Management Systems

Solving the Technology + People + Data Equation

Global Energy Efficiency Accelerator Platform and Progress
in Accelerating Industrial Energy Efficiency

Baku, 19 October 2016

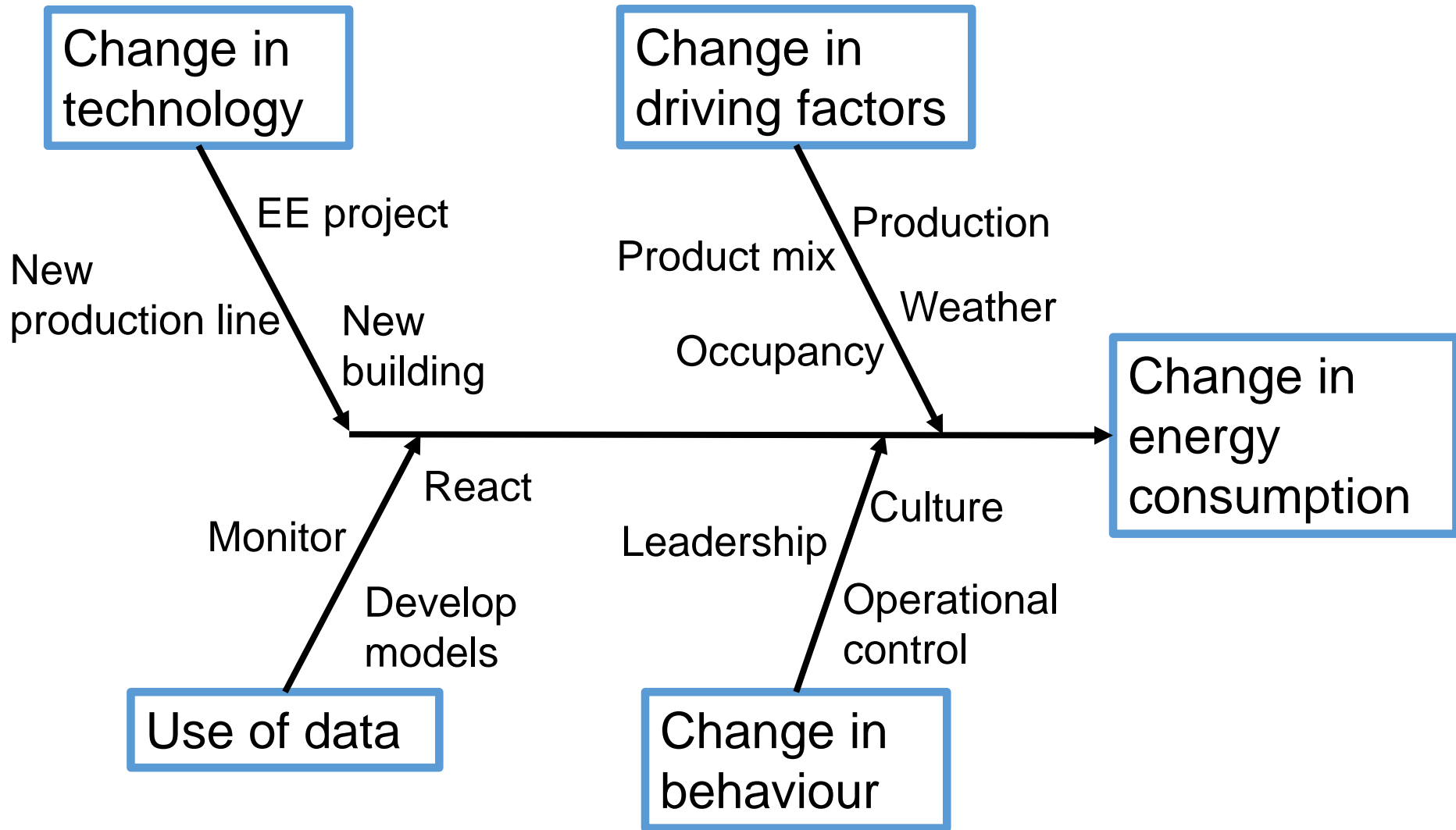
Liam Mc Laughlin



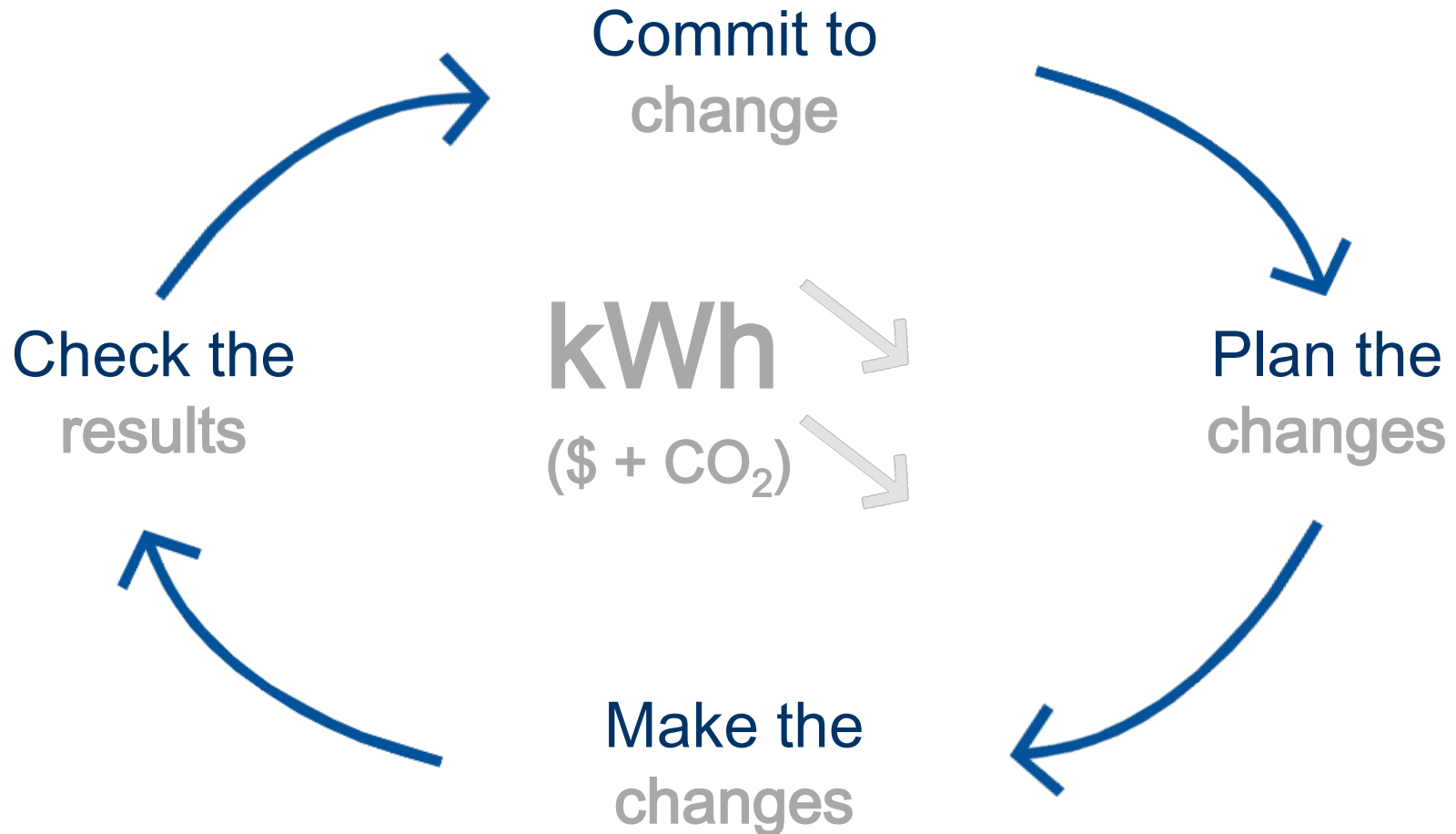
Source: IEA 2015

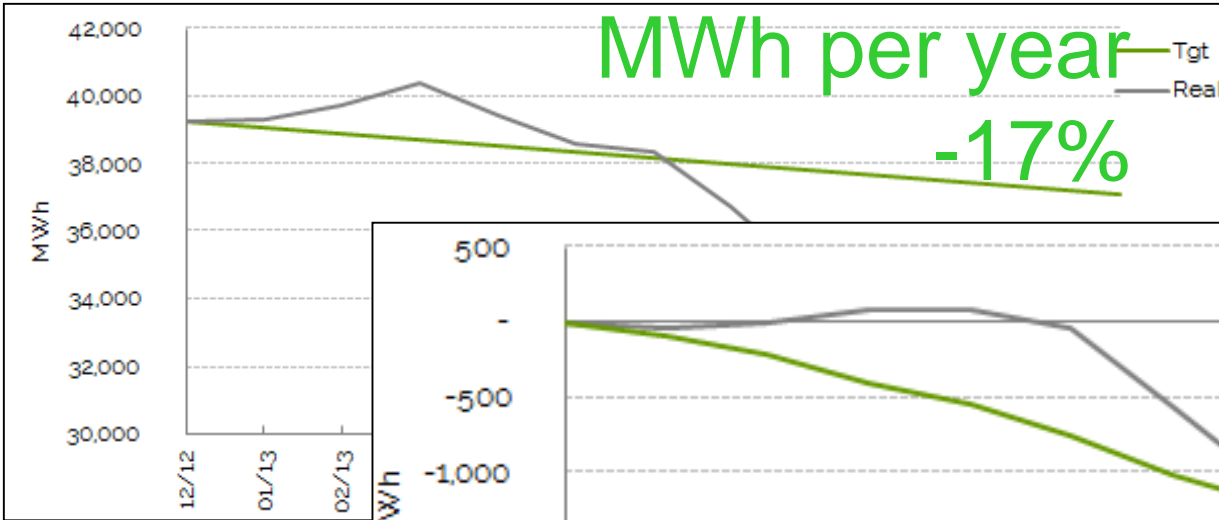
Summary of Achievements (9 countries of UNIDO-GEF Program)

- **303** UNIDO Qualified EnMS Experts
- **271** Enterprises with EnMS implemented
- **5,183** energy efficiency practitioners and enterprise personnel received training in EnMS
- Average annual energy savings of **7,149** GWh
- Annual CO₂ emission reductions of **4,302** ktCO₂
- Annual savings of **\$82,000,000** without considering non-energy benefits

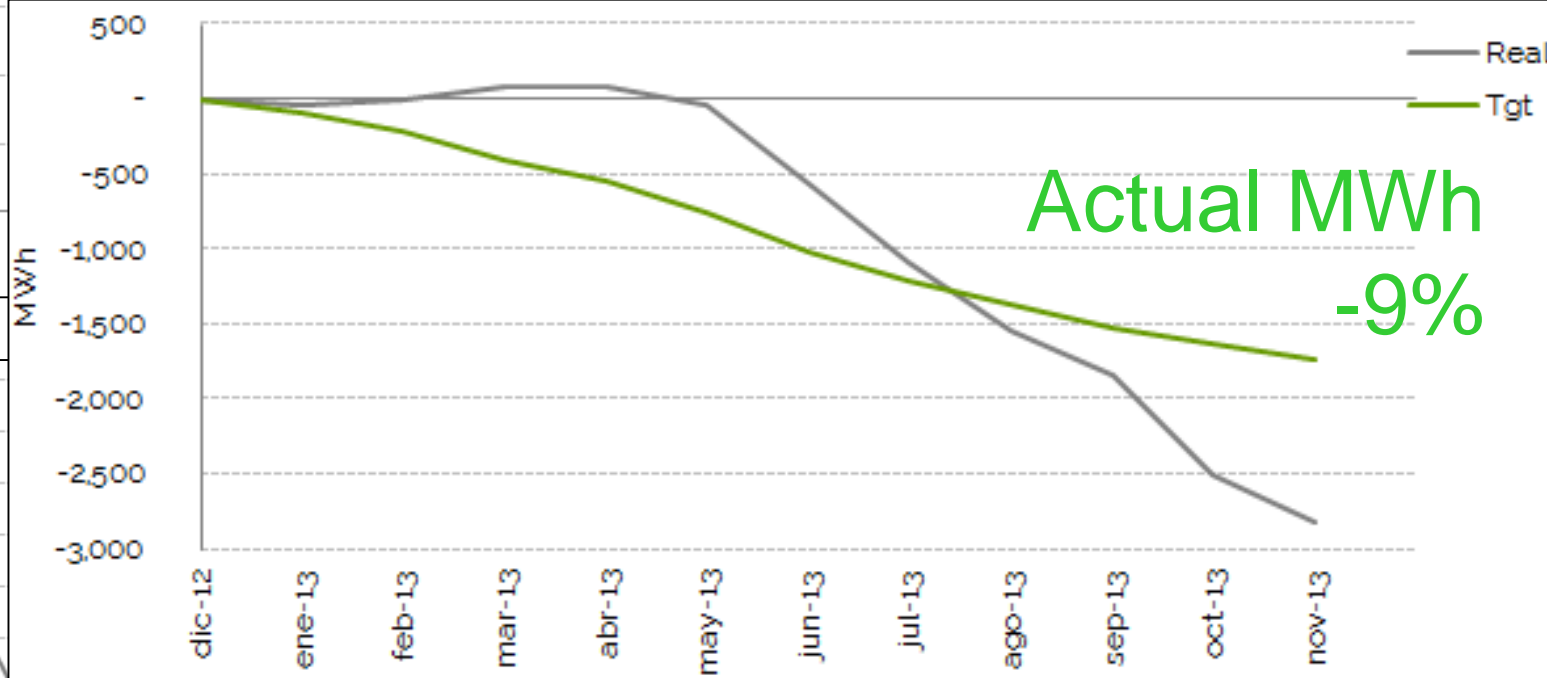
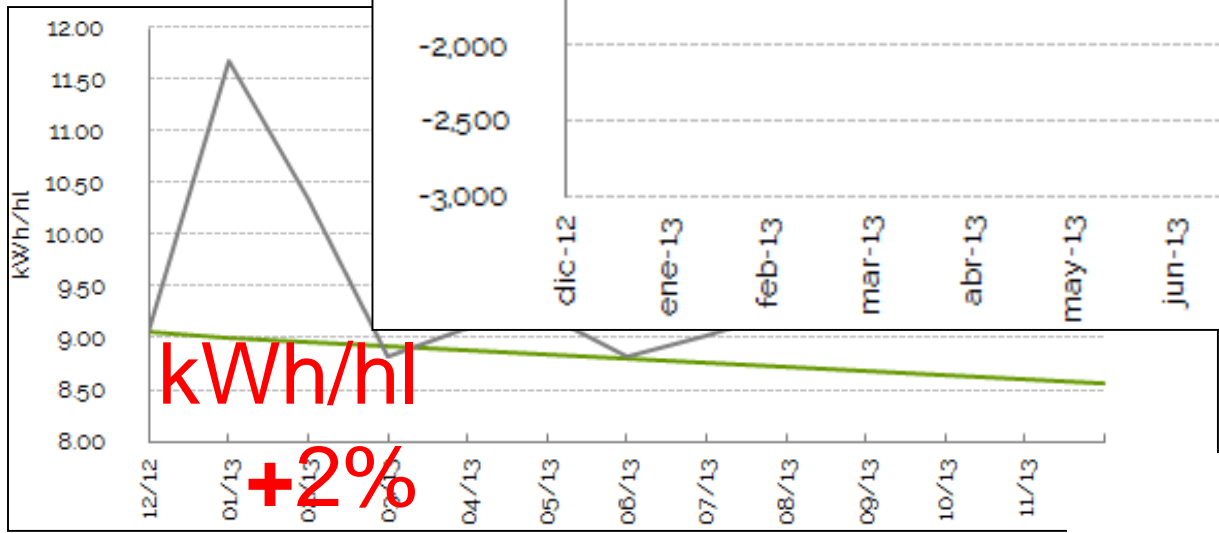


EnMS - ISO 50001 simplified



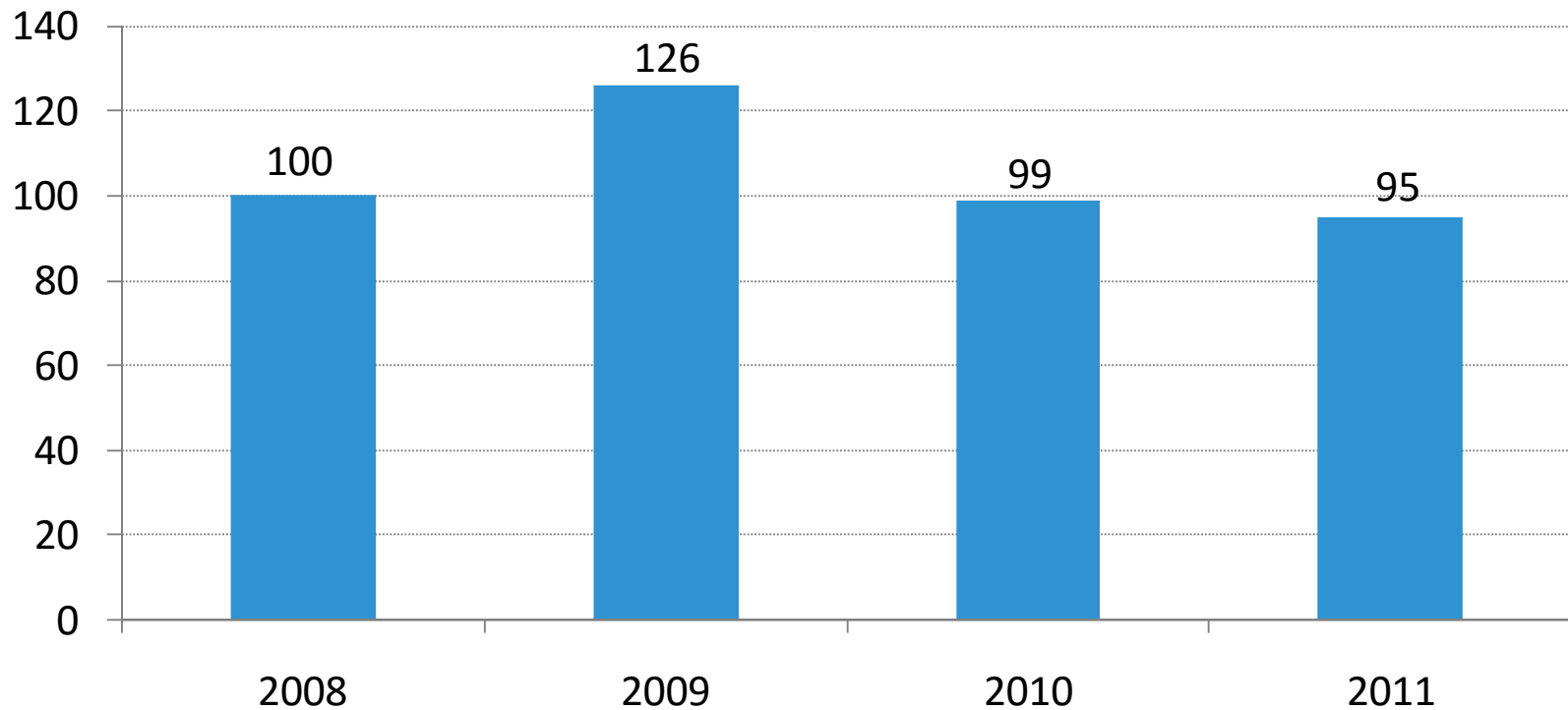


Different purposes and views



Brewing industry

Energy per unit of production



Car assembly industry

"How many managers have been told by their staff that bad coal consumption was due to low output? How is it possible for them to judge whether this is an excuse or a reason?"

These are the opening words from a fuel efficiency bulletin, published in 1943 by the Ministry of Fuel and Power, which criticises the "ton of coal per ton of output" metric as a misleading indicator of fuel efficiency.

The author was Oliver Lyle, managing director of the eponymous sugar refinery, a very knowledgeable and eminent engineer who had no time whatever for the Specific Energy Ratio. Any works engineer today will know that SERs vary continuously for reasons nothing to do with energy efficiency.

Barriers

- **People**
 - Lack of leadership
 - Training
- **Technology**
 - Finance
 - Understanding it
- **Data**
 - Specific Energy Consumption (SEC) based goals
 - Lack of tools

What should we do next?

- Improve alignment at policy level
 - Efficiency v Renewable
 - Promote energy conservation
 - Targets – Action Plans – Measurement
- Capacity building
 - Operation of technology
 - Performance measurement
 - Policy, Agency, Organisation Levels

Is it easy to improve?

