



## Workshop CDM in Industrial Processes

# CDM Programmes instead of CDM Projects ?

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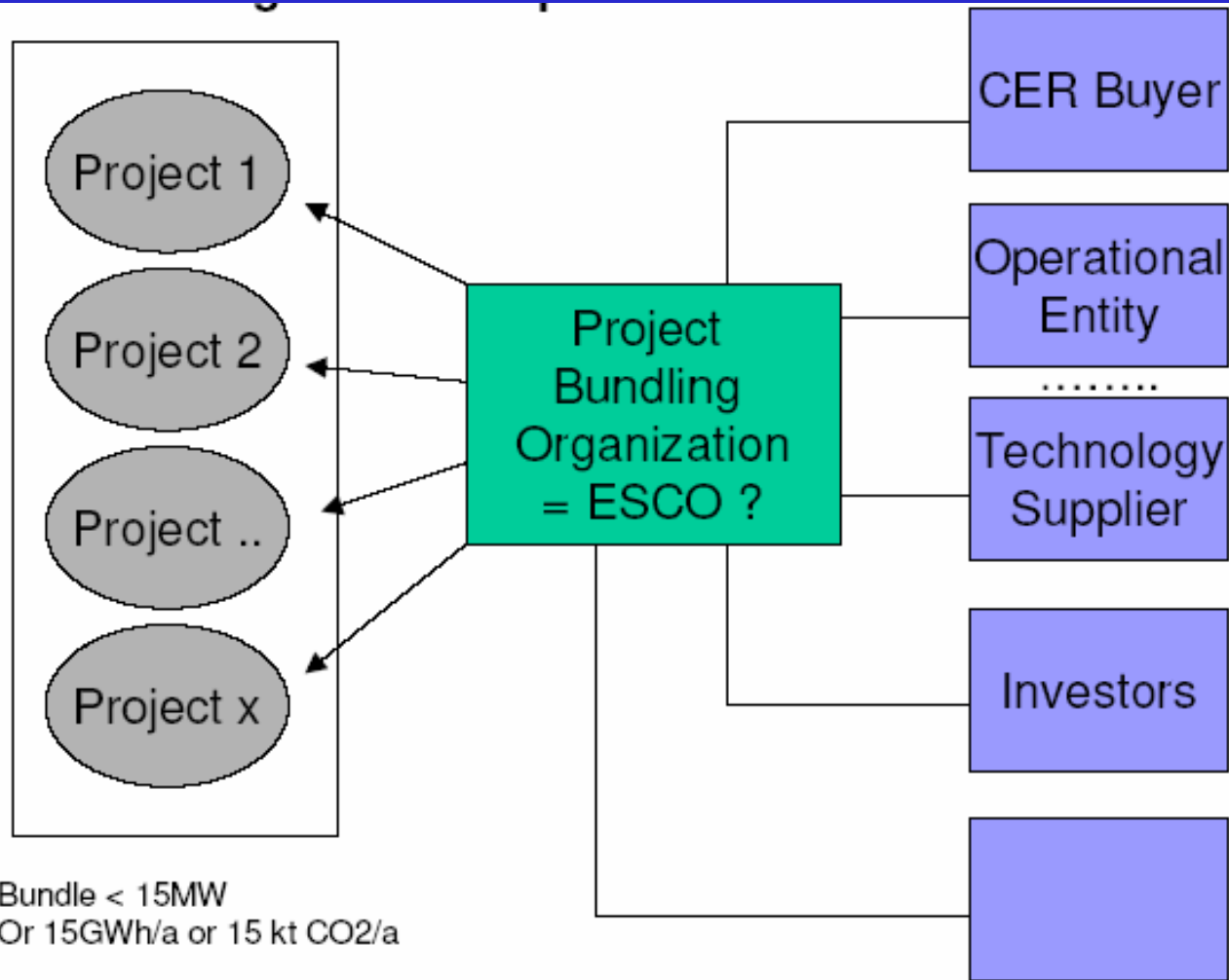
## Critics on CDM

- Critics claim that the process leading to the registration of a project and the issuance of CERs has become too complex and costly.
- Complaints that projects that are most likely to enable host countries' sustainable development such as renewables, energy efficiency and transport projects, are not competitive in the CDM market and are becoming marginalised
- In addition, due to its design as project-based mechanism, some see even the CDM as incapable of achieving fundamental structural changes desired by host countries
- Concept of sectoral (or programme) CDM

## Types of sectoral CDM

- **Policy-based sectoral CDM:** government-driven mechanism that enables non-Annex I Parties to develop national or local policy initiatives that discernible lower GHG emissions in a particular sector. The CERs flow directly to the host government that may choose to pass some of the benefits on to industry and households affected by the measures.
- **Cluster approach:** Mechanism driven by private actors that combine all potential projects within a country or a region along the lines of a sector

# Project Bundling



Source: Factor, 3rd UNEP ECA Workshop in London

## Defining the "Sector"

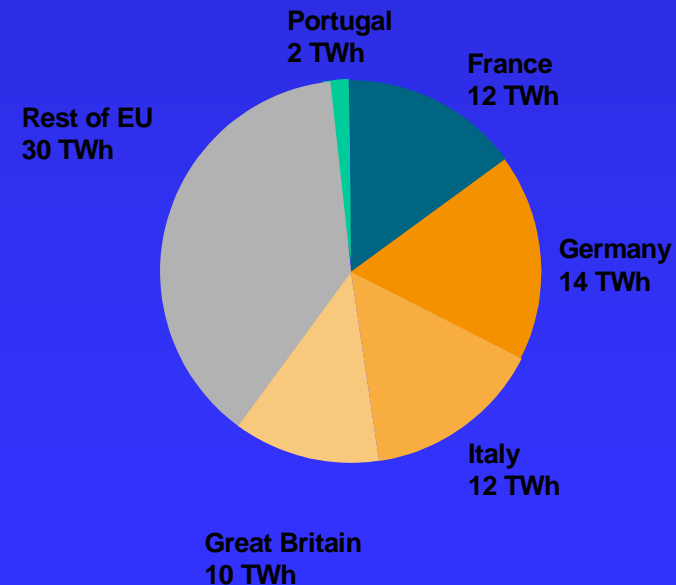
- Using a traditional sectoral definition such as energy sector
- Looking above or below the traditional sectors, e.g. by defining the upgrading of all gas-fired power plants in a country to combined cycles as a project
- Defining a city or a local area as the sector
- Comprising all the emissions of one particular non-CO2 gas in a country in one project
- Targeting the application of one particular technology
- cooperating with other countries in the region to set up a type of project across national boundaries
- Taking a combination of approaches, e.g. transport in a particular city

# Not industrial sector specific Common Energy Efficiency Categories

- **Combustion**
- **Steam**
- **Electricity/Fuel supply and demand reduction**
- **Compressed air**
- **Process equipment**
- **Lighting**
- **HVAC**
- **Fuel switching**
- **Innovative Technologies ( Cogeneration, etc. )**

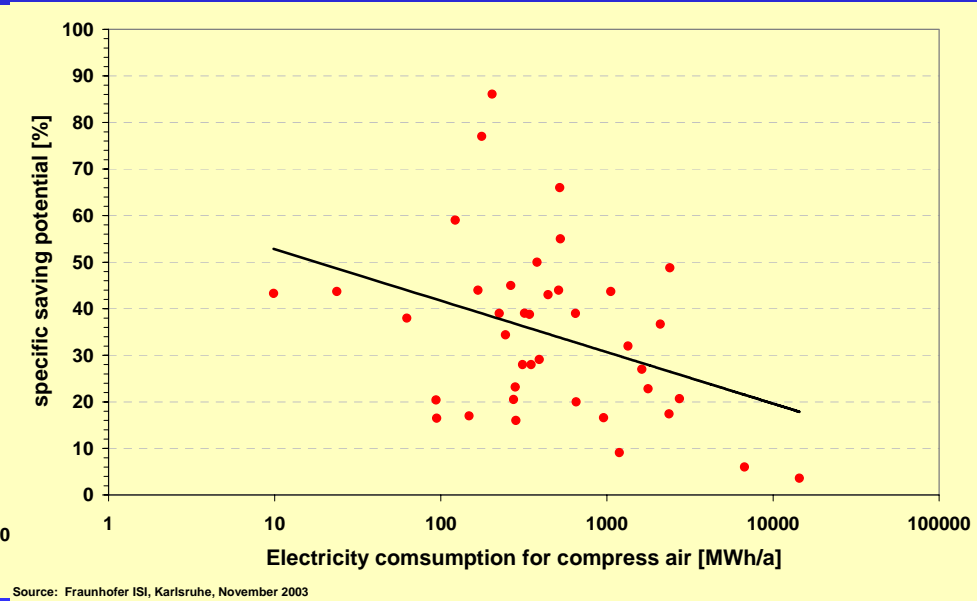
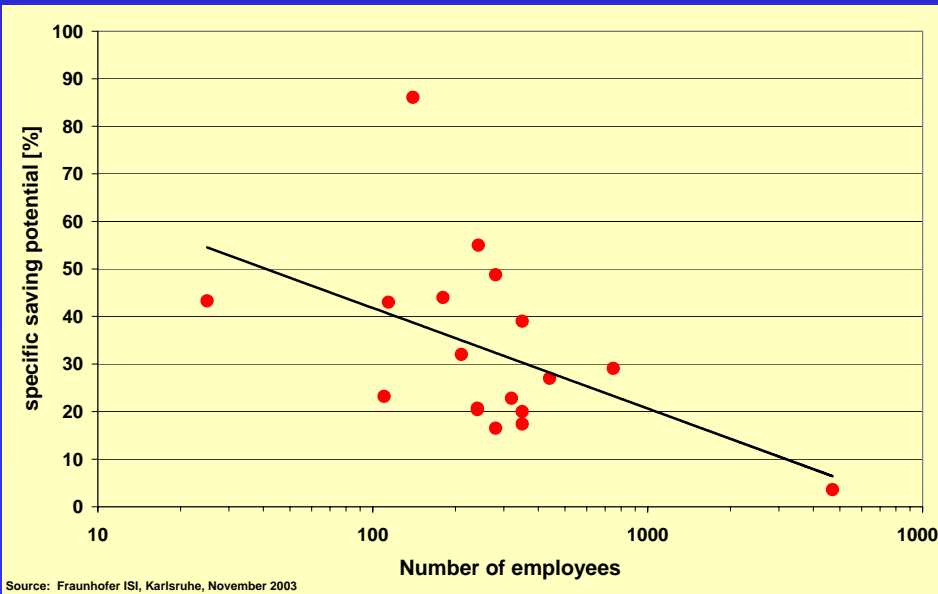
# Experiences from compressed air at industrial sites: Estimates of energy Saving Potential for industrial compressors (based on an EU Study)

Energy savings measure	% applicability (1)	% gains (2)	potential contribution (3)
<b>System installation or renewal</b>			
Improvement of drives (high efficiency motors, HEM)	25 %	2 %	0.5 %
Improvement of drives: (Adjustable speed drives, ASD)	25 %	15 %	3.8 %
Upgrading of compressor	30 %	7 %	2.1 %
Use of sophisticated control systems	20 %	12 %	2.4 %
Recovering waste heat for use in other functions	20 %	20 %	4.0 %
Improved cooling, drying and filtering	10 %	5 %	0.5 %
Overall system design, including multi-pressure systems	50 %	9 %	4.5 %
Reducing frictional pressure losses	50 %	3 %	1.5 %
Optimising certain end use devices	5 %	40 %	2.0 %
<b>System operation and maintenance</b>			
Reducing air leaks	80 %	20 %	16.0 %
More frequent filter replacement	40 %	2 %	0.8 %
		<b>TOTAL</b>	<b>32.9 %</b>
Table legend: (1) % of CAS where this measure is applicable and cost effective (2) % reduction in annual energy consumption (3) Potential contribution = Applicability * Reduction			

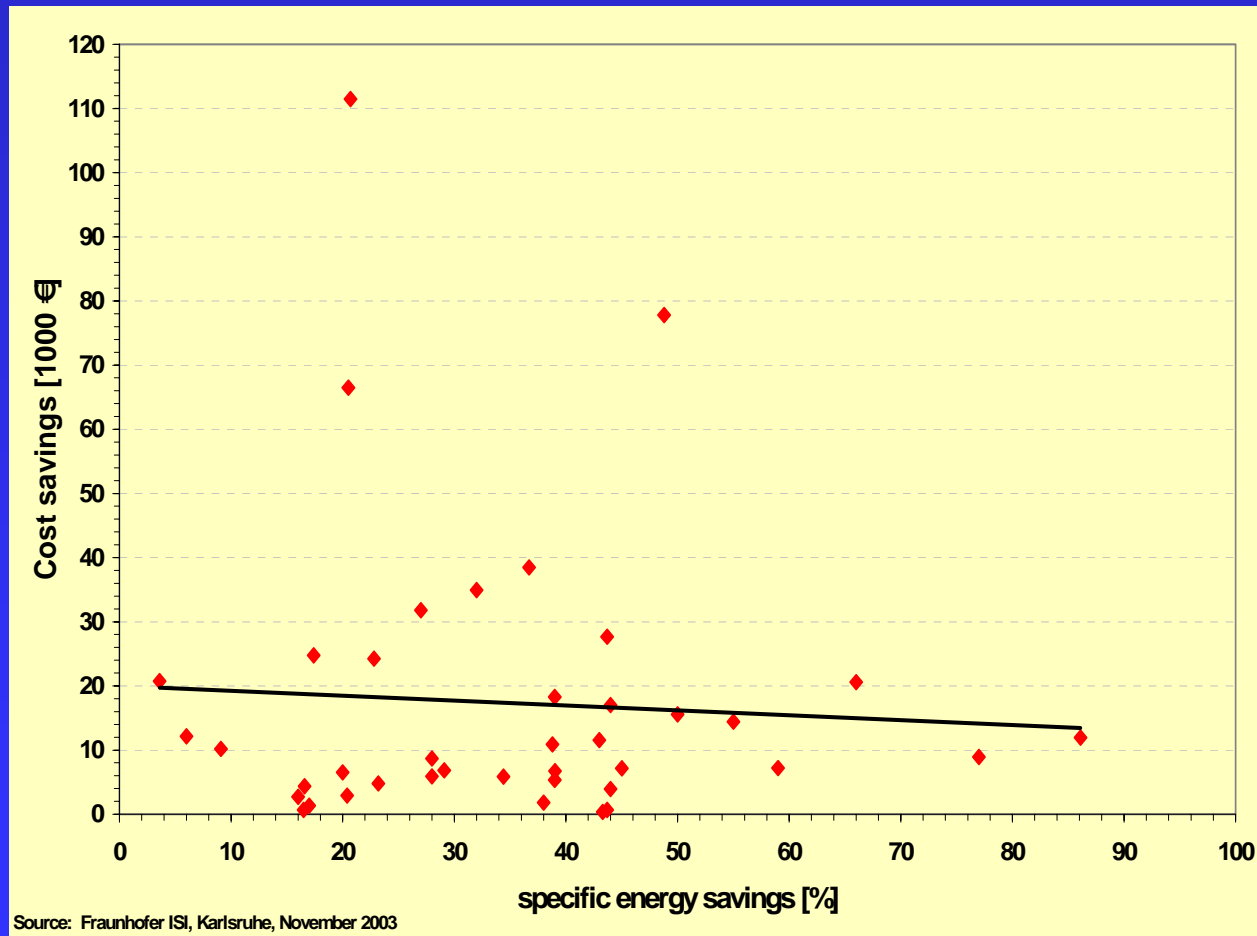


80 TWh = 80.

# Results from Audits in Germany (Campaign "Druckluft Effizient" of the ISI)



# Net savings (Euro) from compressed air measures



## **Druckluft effizient ("Efficient compressed air")**

- **More information on compressed air campaigns:**
- **<http://www.druckluft-effizient.de/e/index.php>**