

Regional Workshop on Monitoring, Reporting and Verification of Greenhouse Gas Emissions



MRV enforcement: Assessment of Emission Reports, on-site Inspections, IT, Experiences with CEMS, Sanctions

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V 3.3 Economic Aspects, Monitoring and Evaluation

Outline

- Ensuring MRV compliance and Quality Assurance in Practice
- Enforcement, sanctions and penalties
- Excursus: Experiences with CEMS

Ensuring MRV Compliance and Quality Assurance in Practice

Ensuring MRV Compliance

Preparation of operators and verifiers

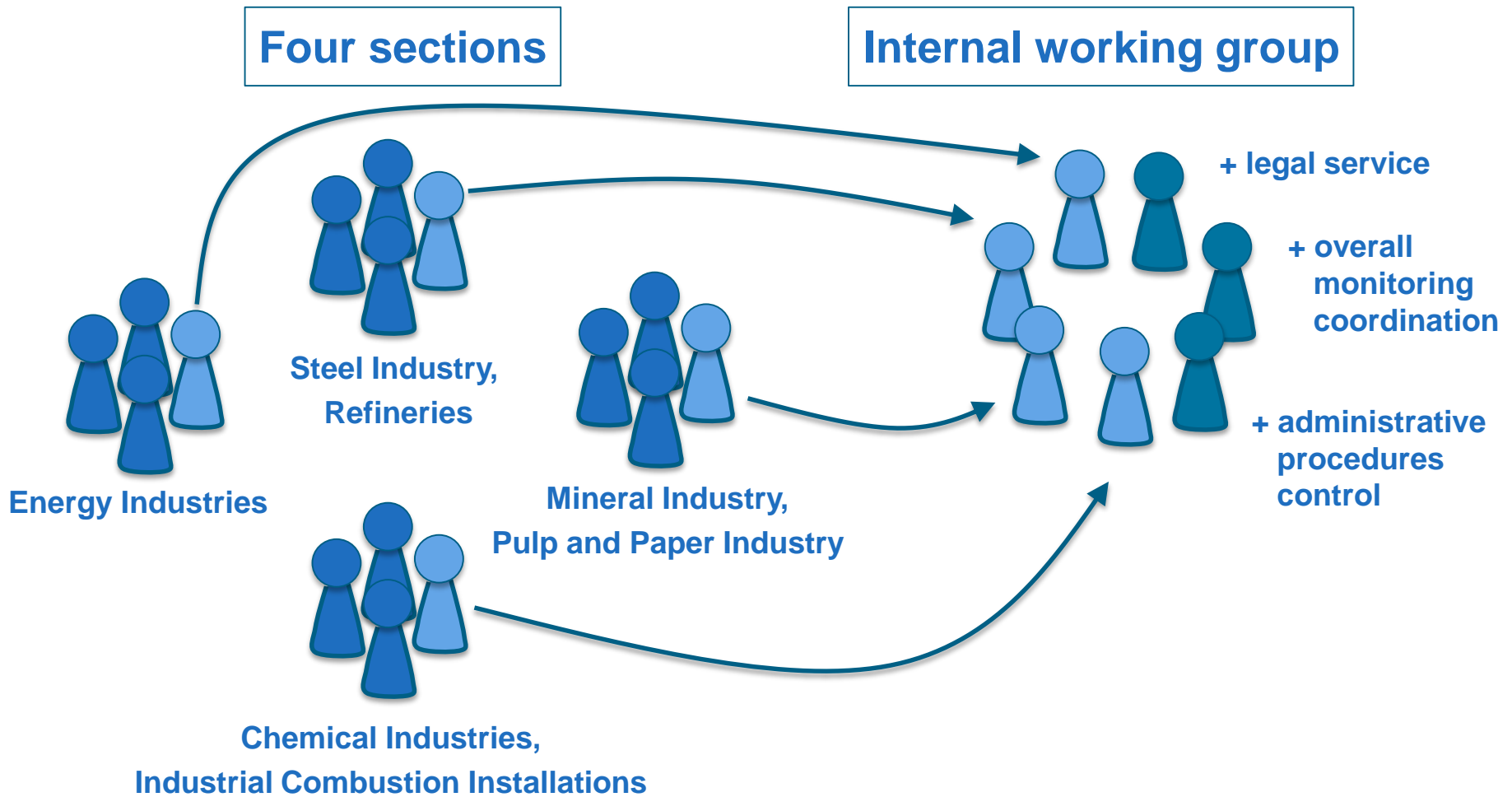
- **Guidance** on compiling MP and AER incl. information for verification
- **IT templates** (front end) for MP and AER
 - mapping legally required content
 - diverse automated checks for completeness and correctness
- Additional **FAQ** for current issues
- Regular **mailings** on updates and developments (homepage, guidance, changes in regulation, invitation to workshops, press releases)
- **workshops** for operators and for NAB/verifiers
- Permanent **helpdesk**

Ensuring MRV Compliance

Preparation of DEHSt staff (inspectors)

- **Trainings**, written **procedures** incl. priorities setting
- Structured internal installation **database** (back end)
 - Including checklists
 - Automated IT-checks
 - Centralised analyses AER data to provide a pre-filtering of error messages
- **Templates** for written hearings, approvals and other decisions
- **Text blocks** incl. juridical justifications
- Regular internal **working group** serving as permanent internal help desk

DEHSt-internal organisation for M&R



Ensuring MRV Compliance

Checks by DEHSt

- **Validation & Approval of MP:** Desktop check
 - Accordance to EU Monitoring & Reporting Regulation (MRR)
 - Focus on monitoring methods (measuring, sampling, analysing incl. QA/QC)
 - Completeness if possible
 - Less important: internal procedures
 - If needed: approval under conditions & clauses
- **On-Site inspection**
- **Review of AER and VR**
 - Some automated checks
 - Plausibility of emission factors, carbon contents, net calorific values
 - Cross checks with historical data and production data
 - Requests for information (with and without suspicion of mistakes)
 - Hearing, administrative offense procedure, correction of reported data, claim for additional number of allowances, sanctions

Additional Quality Assurance Measure

On-Site Inspections (about 10 per year):

Purpose: Compliant monitoring and reporting

- evaluation of aspects not verifiable at desktop inspection,
- clarification of issues/suspicion in an efficient way,
- increasing quality pressure on operators

Participants: Operator, DEHSt, optionally: regional CA, verifier, consultants

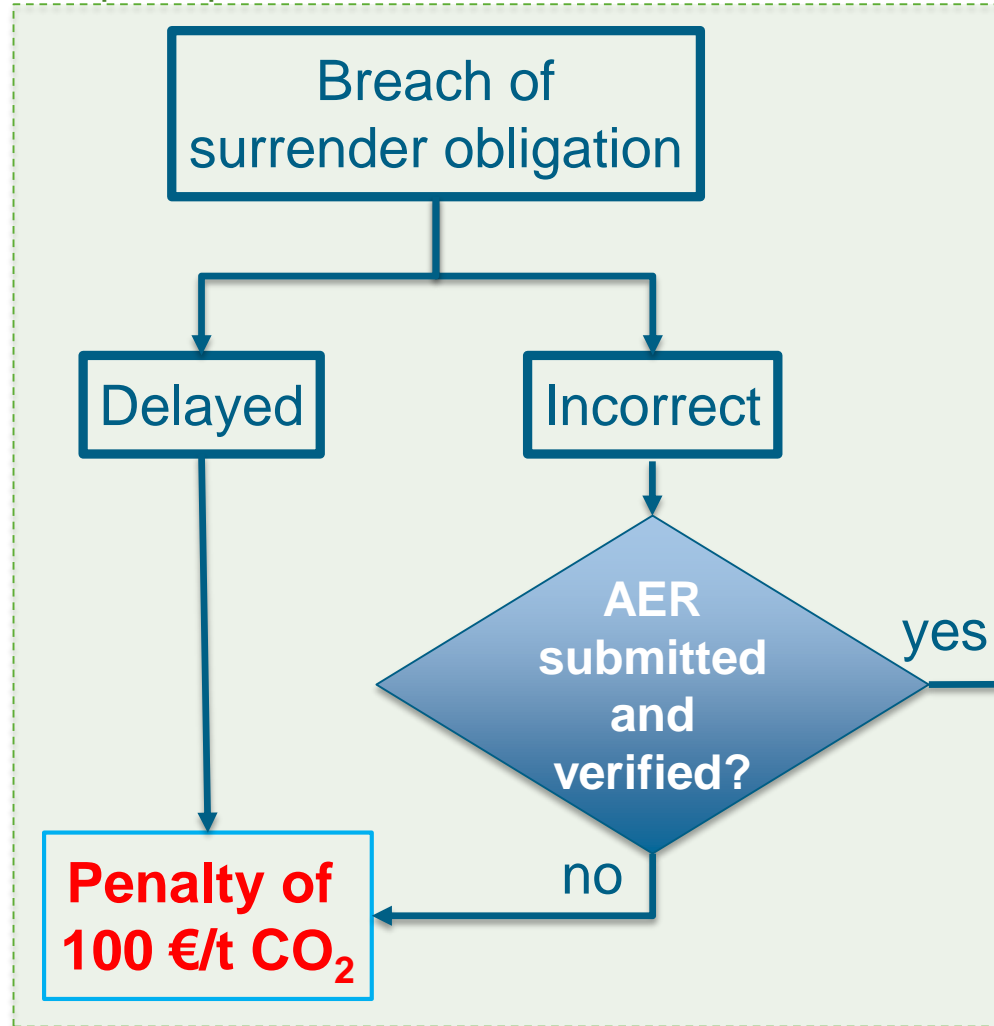


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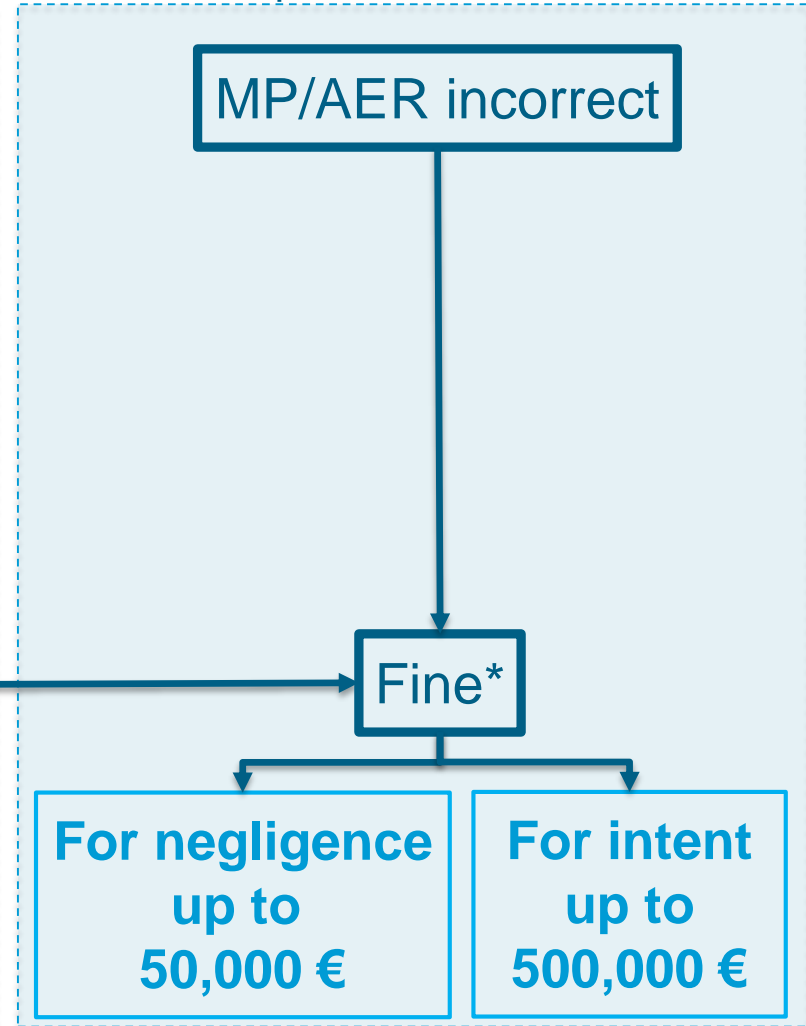
Enforcement, sanctions and penalties

Sanctioning mechanism

European process



National process



* up to 3 years retroactively

Lessons learned in Germany & key elements for a robust MRV system

- Legal framework
- Powerful competent authority with professional scepticism, strict enforcement incl. financial penalties (sanctions)
→ “A tonne must be a tonne”
to avoid market distortions and to guarantee a level-playing-field!
- Use of IT wherever possible

Excursus: Experiences with CEMS

Use of CEMS in EU ETS

- In typical combustion installation → CEMS doesn't play an important role
- CEMS is applied if several inhomogenous source streams (e.g. substitute fuels) are used
- Focus of CEMS in DE:
 - Incineration of inhomogeneous fuels in power plants and thermal treatment plants,
 - Chemical plants (e.g. production of sulphuric acid or bulk organic chemicals),
 - Regeneration of catalysts,
 - and thermal post-combustion

Selected advantages (green) and disadvantages (black)

CEMS	Calculation
<p>One measurement system per emission source, i.e. processing of few primary data</p>	<p>processing different primary data from different sources (quantity measuring instruments, stock balances, laboratory analyses etc.).</p>
<p>Only information on flue gas flow available. No evaluation based on individual source streams possible.</p>	<p>Information available on individual source streams and their properties (e.g. NCV, EF). Evaluations based on individual source streams possible.</p>
<p>Normative specifications for collection, evaluation, quality assurance and documentation of data.</p>	<p>Various individual QA systems. In many areas no uniform specifications for evaluation and documentation of test results.</p>
<p>High degree of automation in the evaluation of emission data possible.</p>	<p>Often many manual data processing steps necessary.</p>
<p>No additional effort if different and/or inhomogeneous fuels are used.</p>	<p>High effort for sampling and analysis if different and/or inhomogeneous fuels are used.</p>
<p>Little experience with correct implementation of evaluation regulations.</p>	<p>Data evaluation methods established over many years.</p>
<p>retrofitting/optimisation of the existing measuring systems is necessary.</p>	<p>Multiple use of billing and energy data (e.g. from regulated areas) → Synergies</p>

Thank you for your attention!

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