Central System of Emissions
CSE

Ulrich Schellmann, Seven2one Inc.
The CSE-MESAP Solution

Data Management for Input Data and Results

Analysis and Presentation of Results

Methodologies

The CSE-MESAP Solution

Web Client

CalQlator

Reports

UNFCCC

CRF

LC

P

MESAP Information System

Data Handling

CSE Administration

Excel Analyst

Web Client

CalQlator

Reports

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Database

CSE

Database

PoSo

MS Access

MS SQL Server

ORACLE Server
Time Series Object

Annual CO2 Emission of Passenger Cars in Urban Driving Sector for the City Berlin in Germany in Gtons

<table>
<thead>
<tr>
<th></th>
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<td>56,673</td>
<td>62,829</td>
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Multi-dimensional Time Series Key

Specs

Data Values
### Data Values

#### Berlin Emission CO2 Pass. Cars Diesel

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<tr>
<th>Year</th>
<th>Gt</th>
<th>Year</th>
<th>Gt</th>
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<table>
<thead>
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<th>Month</th>
<th>Jan</th>
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<th>Dec</th>
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<tr>
<td>1996</td>
<td>489.32</td>
<td>502.56</td>
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<td>521.87</td>
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<th>Berlin</th>
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<th>Pass. Cars</th>
<th>Diesel</th>
<th>Gt</th>
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<td>6,673</td>
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Master Data

Navigation Tree

- PowerPlants
  - Utility A
    - Coal Power Plant
      - Block (a)
        - Boiler
        - Generator
        - REA
          - Turbine
    - Block (b)
  - Utility B
    - Nuclear Power Plant
      - Generator
      - Reactor
      - Turbine
  - Utility C

Master Data Form

<table>
<thead>
<tr>
<th>Identdata</th>
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<tbody>
<tr>
<td>Name of Unit</td>
<td></td>
</tr>
<tr>
<td>Location of Unit</td>
<td>Berlin</td>
</tr>
<tr>
<td>Owner</td>
<td>E.ON AG EnBW</td>
</tr>
<tr>
<td>Type of Unit</td>
<td>Thermal</td>
</tr>
<tr>
<td>EURELECTRIC Classfication</td>
<td>Monovalent Lignite</td>
</tr>
<tr>
<td>Fuel</td>
<td>Coal</td>
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<table>
<thead>
<tr>
<th>Technical Data</th>
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<tbody>
<tr>
<td>Commission Year</td>
<td>01.05.1983</td>
</tr>
<tr>
<td>Decommission Year</td>
<td></td>
</tr>
<tr>
<td>Lifetime</td>
<td>45</td>
</tr>
<tr>
<td>Gross Power (MW)</td>
<td></td>
</tr>
<tr>
<td>Gross Power (TS)</td>
<td>865 MW (1998)</td>
</tr>
<tr>
<td>Betriebsarbeit</td>
<td>Kein Wert#</td>
</tr>
<tr>
<td>Efficiency</td>
<td>39.7 % (1998)</td>
</tr>
<tr>
<td>Combined Cycle</td>
<td>Ja</td>
</tr>
<tr>
<td>Combined Heat&amp;Power</td>
<td>Ja</td>
</tr>
</tbody>
</table>
Workflow in CSE

- User Defined Data Views
- Import Facilities
- Plausibility Checks
- Unit Conversion (SI)
- Currency Exchange Rates
- Documentation
Workflow in CSE

- Equation Editor
- Integrity Checker
- Solver
- Emission Calculation

CSE Database
Workflow in CSE

- MS Excel Environment
- Hot-Links to Database
- Shift Inventory Year
- MESAP Unit Handling
- Preparation for Submission

Update Report
Advantages of CSE/MESAP

- lower cost: standardized software
- higher consistency: single relational DB
- faster reporting: Excel reports with Hot-links
- higher quality: extensive documentation, automated processing
- secure data: access rights management
- expandable: modular, flexible design
- scalable: client/server architecture

Flexibility without programming
Thank you for your attention!

Demonstration of the Software at Poster Presentation
today 6:00 pm - 8:00 pm