

# HEAT<sub>ON</sub> POWER

GREEN RATING OF COAL-BASED THERMAL POWER PLANTS



## Green Rating: What we do and why?

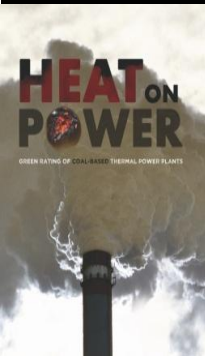


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# CSE's Green Rating Project - what and why?

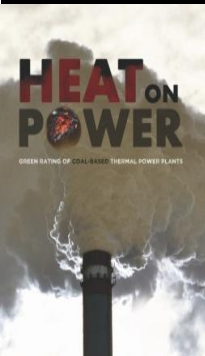
- ✓ GRP is a **public tool to leverage change**
- ✓ It benchmarks the present. And points to the way ahead.
- ✓ It sets **difficult goal-posts**: Pushes towards desirable not what is easily achievable.





# Pushing for change

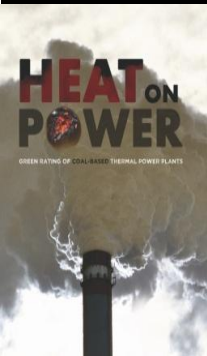
Scores	Awards Category	Criteria
Above 80%	5 Leaves award	Performance far exceeding compliance requirements <b>Global best</b> technology Best management practices
60% to 80%	4 Leaves award	Good Compliance <b>Very Good technology</b> and performance Strong management practices
40% to 60%	3 Leaves award	<b>Average</b> compliance Good technology and performance Average management practices
30% to 40%	2 Leaves award	<b>Below average compliance</b> Below average technology and performance Basic management practices
20% to 30%	1 Leaf award	<b>Poor performance</b> Frequent cases of non-compliance In adequate management practices
Less than 20%	No award	<b>Regular non-compliance; non participation</b> Poor performance and management practices





# Our Belief

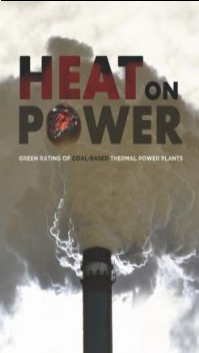
- ✓ Public disclosure must for credible action
- ✓ We rate everyone – who agree or those who do not. Environment is public good
- ✓ Industry will grow, but growth has to be business-unusual





# 'Working' industry: rating and re-rating

- ✓ Pulp and Paper 1999
- ✓ Pulp and Paper revisited 2004, 2013

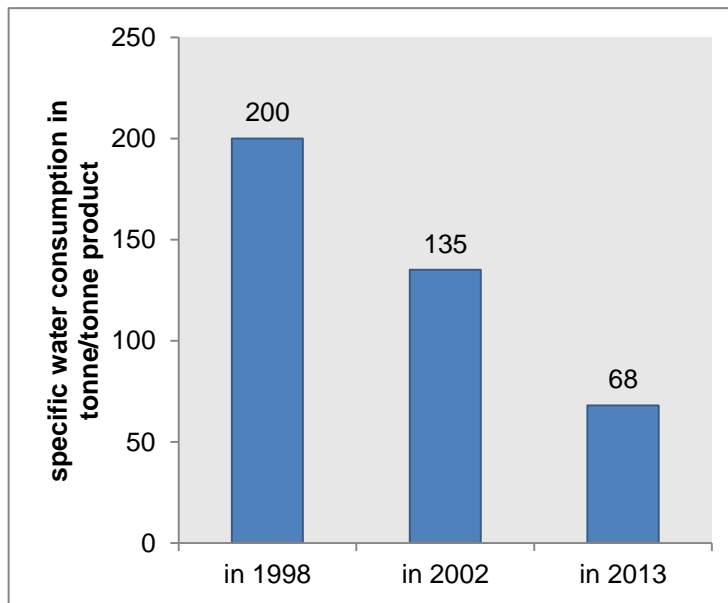




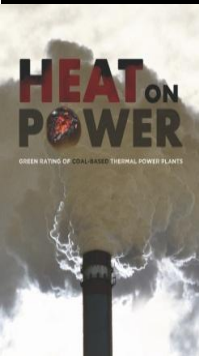
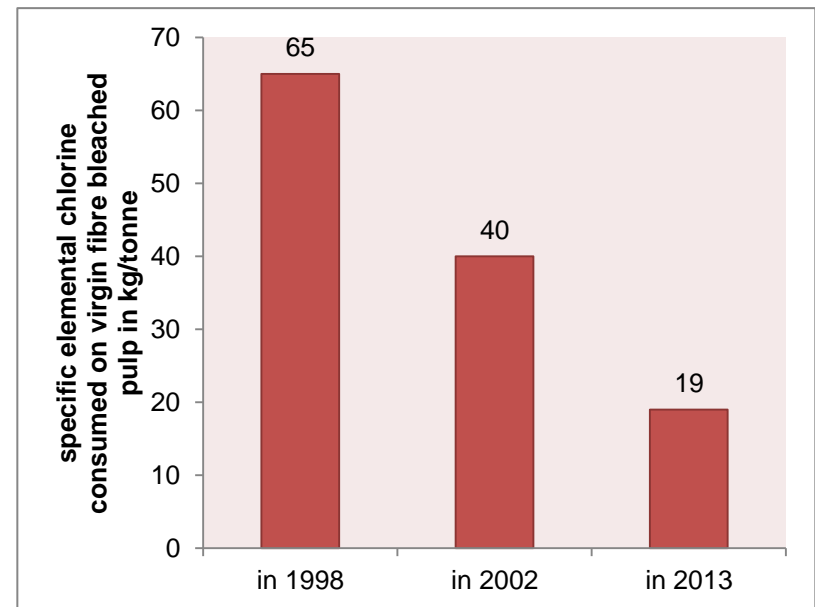
# Differences made

- ✓ Difference was **willingness of the companies to participate and engage**
- ✓ Difference was **significant improvement** in environment management systems

**Reduction** in specific water consumption



**Reduction** in elemental chlorine consumption

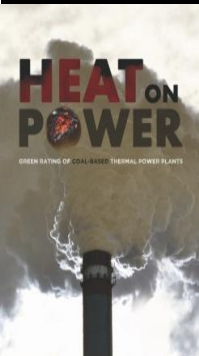
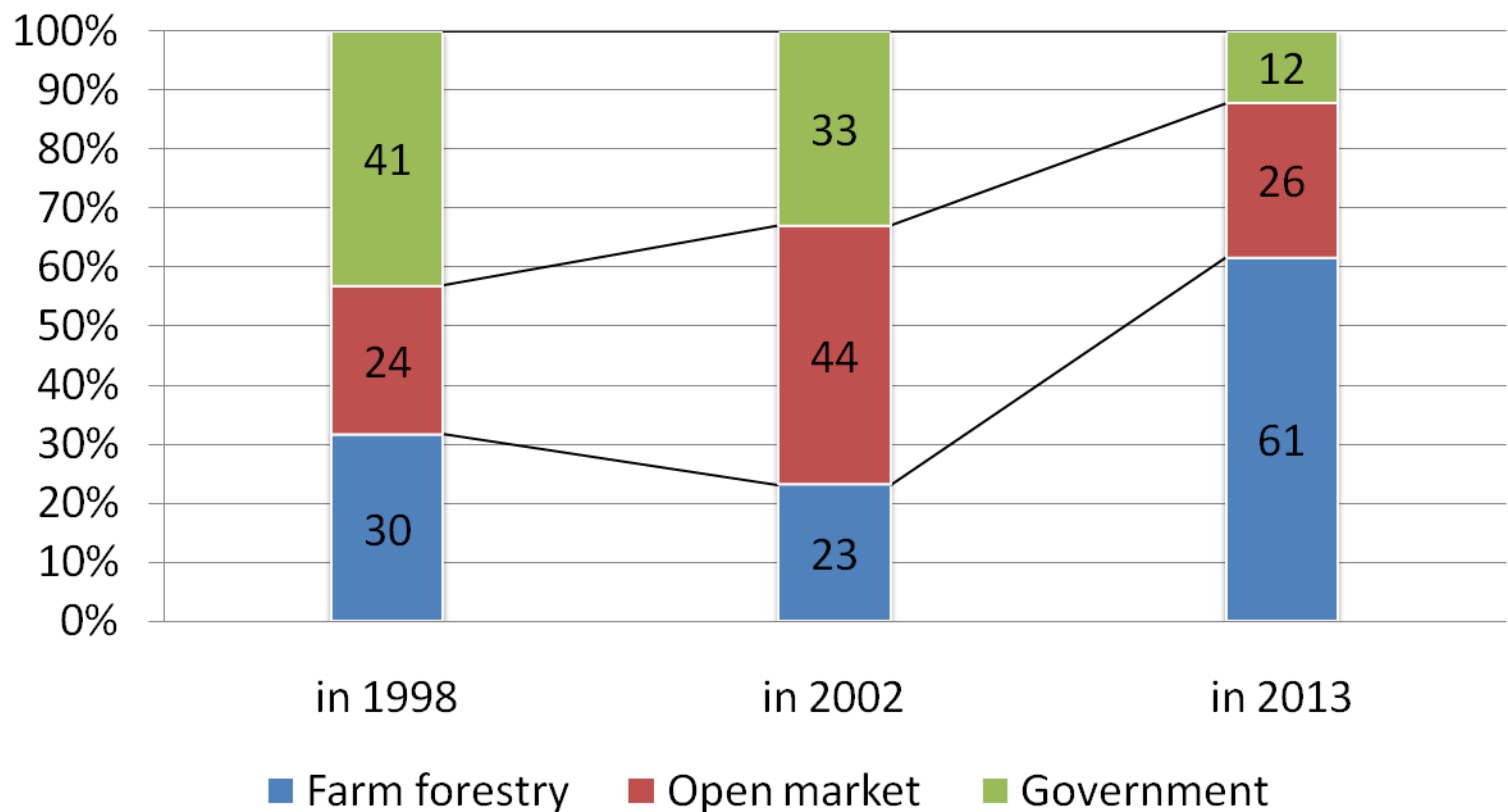






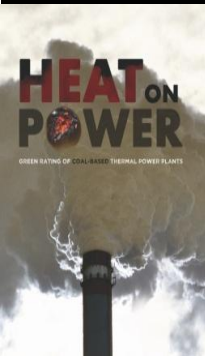
# Differences made

## Sustainable Sourcing: Increase in wood sourced from farms





# Automobile Rating 2001



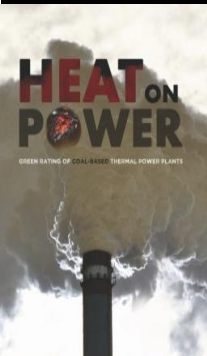
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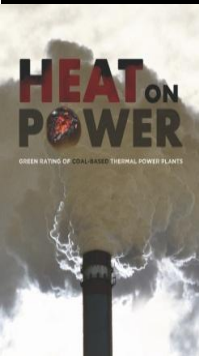
# Consequence

- ✓ High disclosure – **emission certificates made public** for 1<sup>st</sup> time for each vehicle
- ✓ Supply chain management – **outsourcing pollution** – recognized and practices changed
- ✓ Pushed for **better technologies** for better pollution control





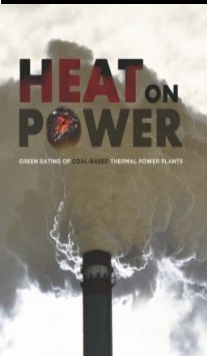
# Chlor-Alkali 2002





# Impact

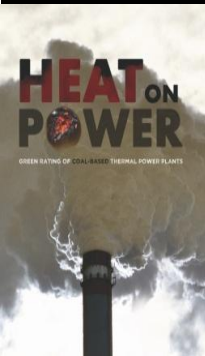
- ✓ Regulation for **mercury changed globally and in India**. Study showed high unaccounted for mercury. Pushed to regulate on input not discharge
- ✓ Mercury use **nearly phased out** – from 70% to some 10% now





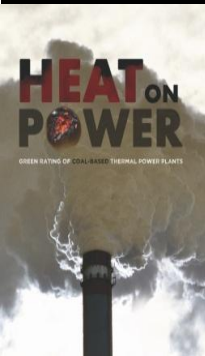
# Cement 2005

- ✓ Recognition that Indian cement industry is matching global best standards for energy use and GHG emissions. Changed the perception of industry and pointed to **challenges of mining**





# Steel 2012

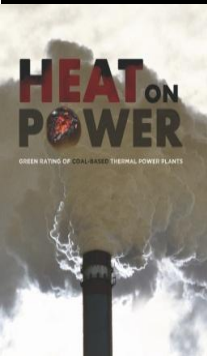


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# Outcomes

- ✓ Vizag Steel improved their metallurgical waste water treatment facilities which was polluting the sea.
- ✓ JSW Steel appointed Safety services inspectors spending Rs. 300 Million in five years to improve occupational safety

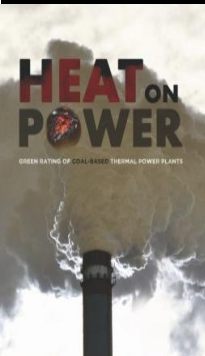






# Rationale for rating coal- based thermal power sector

- ✓ Core industrial sector - set to expand
- ✓ Resource intensive – water, coal and land
- ✓ High pollution potential
- ✓ Responsible for more than half the country's GHG emissions





# Coal thermal power

- ✓ Difficult issue for environmentalist
- ✓ Would like it to go. Huge costs of extraction; fossil use in climate change; pollution impacts on local communities
- ✓ But recognize that it will stay for countries like India. No country has disengaged as yet. So even as we push for renewables the question is how to clean coal thermal power
- ✓ Is it possible? What do we do? **How?**

