
NRG
CMS:
Supply Chain Sustainability
in Practice
LEVERAGING YOUR SUPPLY CHAIN:
Chemical Management
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October 12, 2010
Reliant Energy
NINA
CBY4
WELCOME TO NRG

Safe Harbor Statement

This Presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are subject to certain risks, uncertainties and assumptions and typically can be identified by the use of words such as “expect,” “estimate,” “should,” “anticipate,” “forecast,” “plan,” “guidance,” “believe,” “will” and similar terms. Such forward-looking statements include information relating to no and low carbon development projects. Although NRG believes that these expectations are reasonable, it can give no assurance that these expectations will prove to have been correct, and actual results may vary materially. Factors that could cause actual results to differ materially from those contemplated above include, among others, general economic conditions, hazards customary in the power industry, weather conditions, competition in wholesale power markets, the volatility of energy and fuel prices, failure of customers to perform under contracts, changes in the wholesale power markets, changes in government regulation of markets and of environmental emissions, the condition of capital markets generally, adverse results in current and future litigation, failure to identify or successfully implement acquisitions and repowerings, and the inability to implement value enhancing improvements to plant operations and companywide processes.

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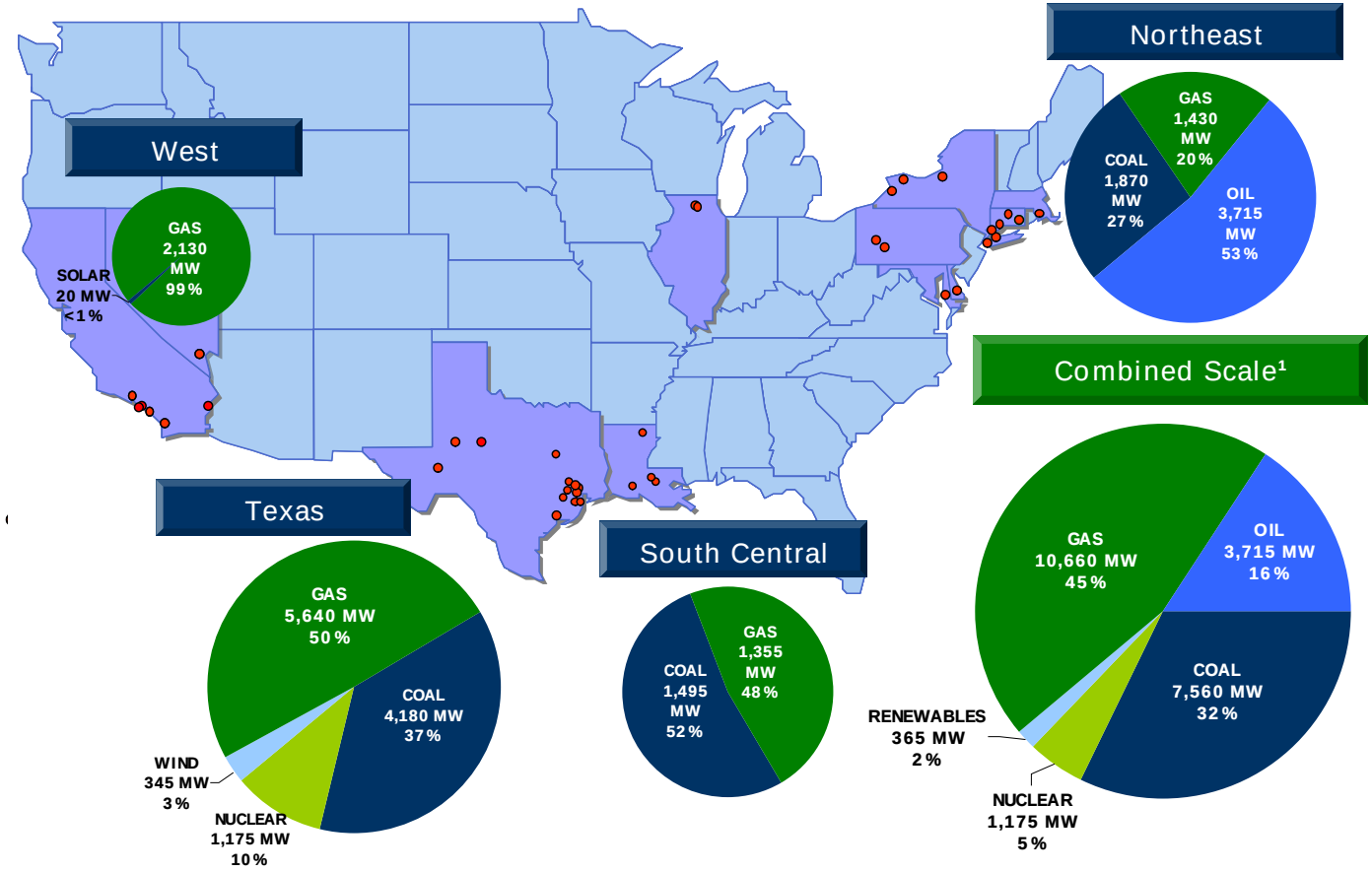
NRG: Portfolio with Scale and Diversity



71 million megawatt hours of electricity and 59 million metric tons of CO2e in 2009

¹ Includes 115 MW as part of NRG's Thermal assets. For combined scale, approximately 2.095 MW is dual-fuel capable. Reflects only domestic generation capacity as of December 31, 2009

MW data as of December 31, 2009

Asset scale, diversity of fuel and location provide value creation opportunities

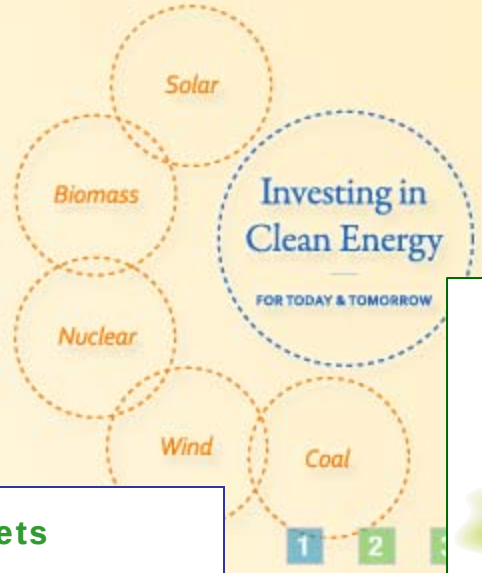
NRG: Clean Energy of the Future

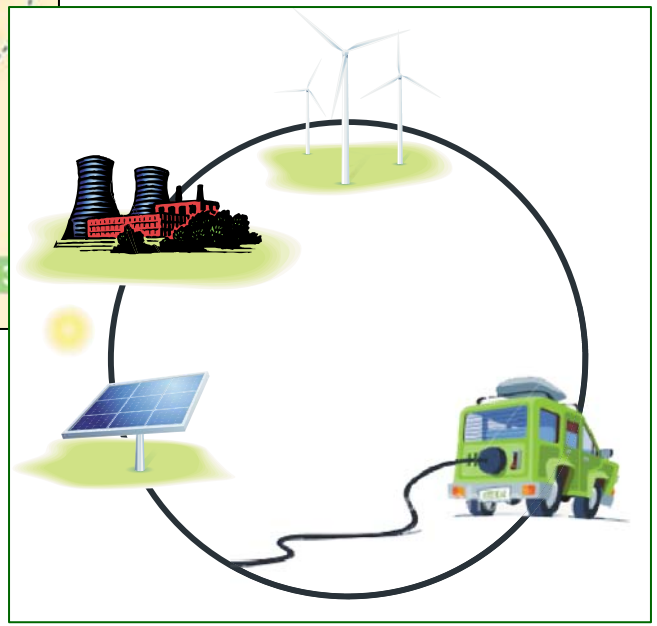
CLEAN NRG

NRG is contributing to the fight against climate change by investing in promising clean energy technologies, such as new nuclear, solar, wind and biomass.

View our brochure on our clean energy investments to find out more.

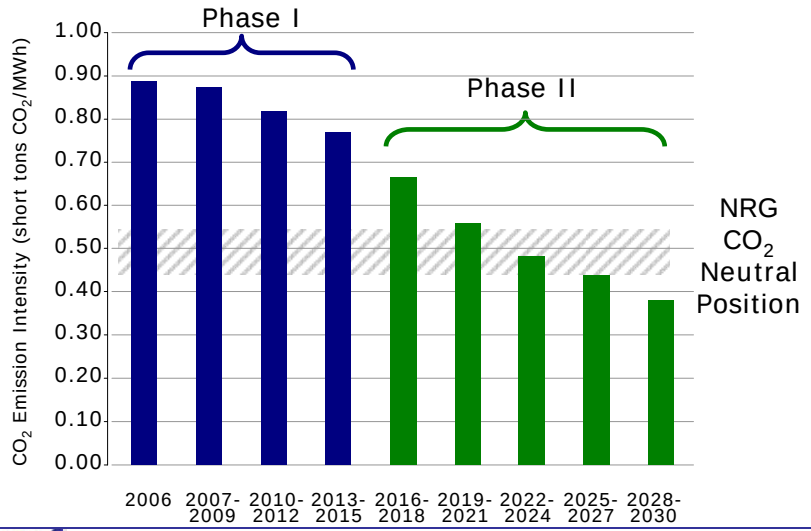
GO





NRG CO_2 Intensity Targets

(Repowering NRG and econrg Phase I & II)



From compliance to carbon and everything in between

Reducing our Footprint at Home & Work

Plant Performance

Home & Work Energy Use

Lighting

What Do You Drive?

Reduce, Reuse, Recycle

Partners

Supply Chain Sustainability: Where to begin?

- Benchmarking
- Ask them- 20 top suppliers excluding fuel
  - WHAT DO YOU DO FOR SUSTIANABILITY?
  - ANY SUCCESSES?
  - WHAT COULD WE DO BETTER?
- Results

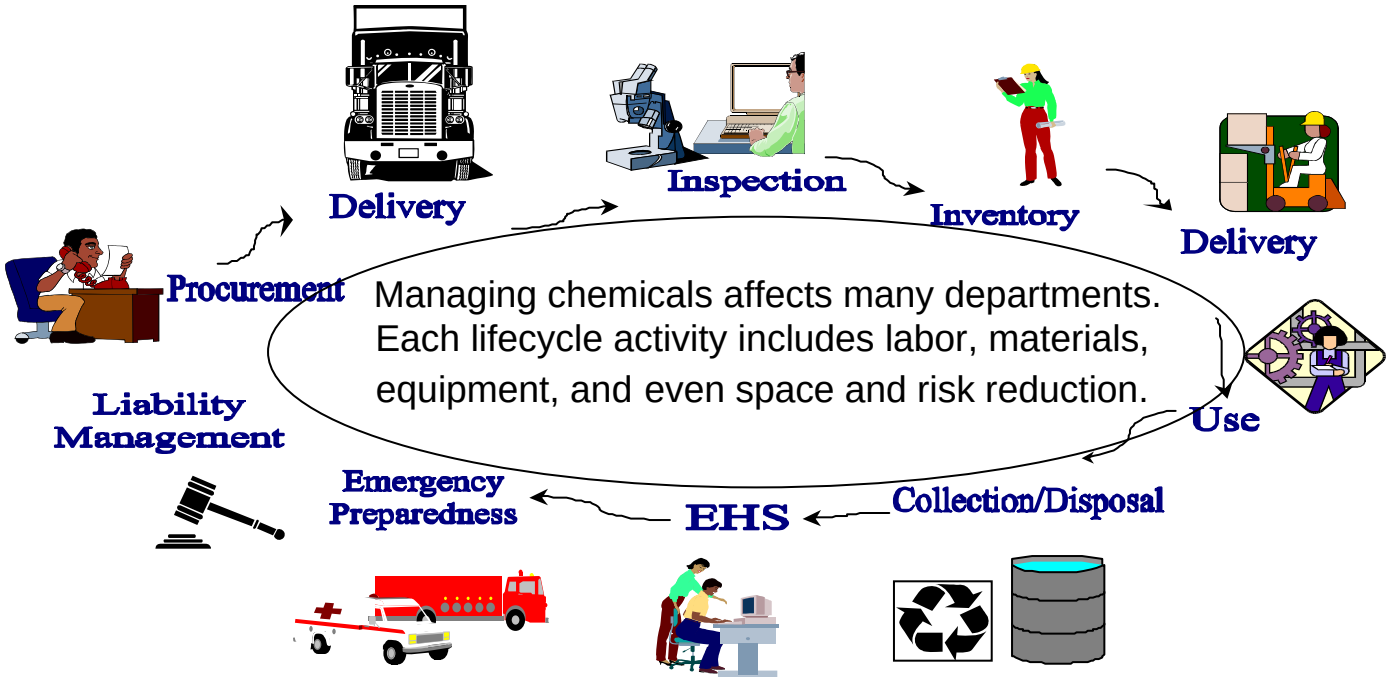
- Implement great ideas

ADELMAN TRAVEL GROUP

haas group international NALCO

STAPLES

Lifecycle Chemical Management



Sourcing and Procurement

- Supplier selection and management
- Alternate supplier contingency
- Purchase transaction
- Order tracking

Process Analysis & Optimization

- Usage tracking
- Chemical use efficiency monitoring
- Process monitoring
- Process Efficiency Improvement (PEI) Analysis and Recommendation

haas group international

21 NRG facilities since May 2008

EHS Compliance Automation Assistance

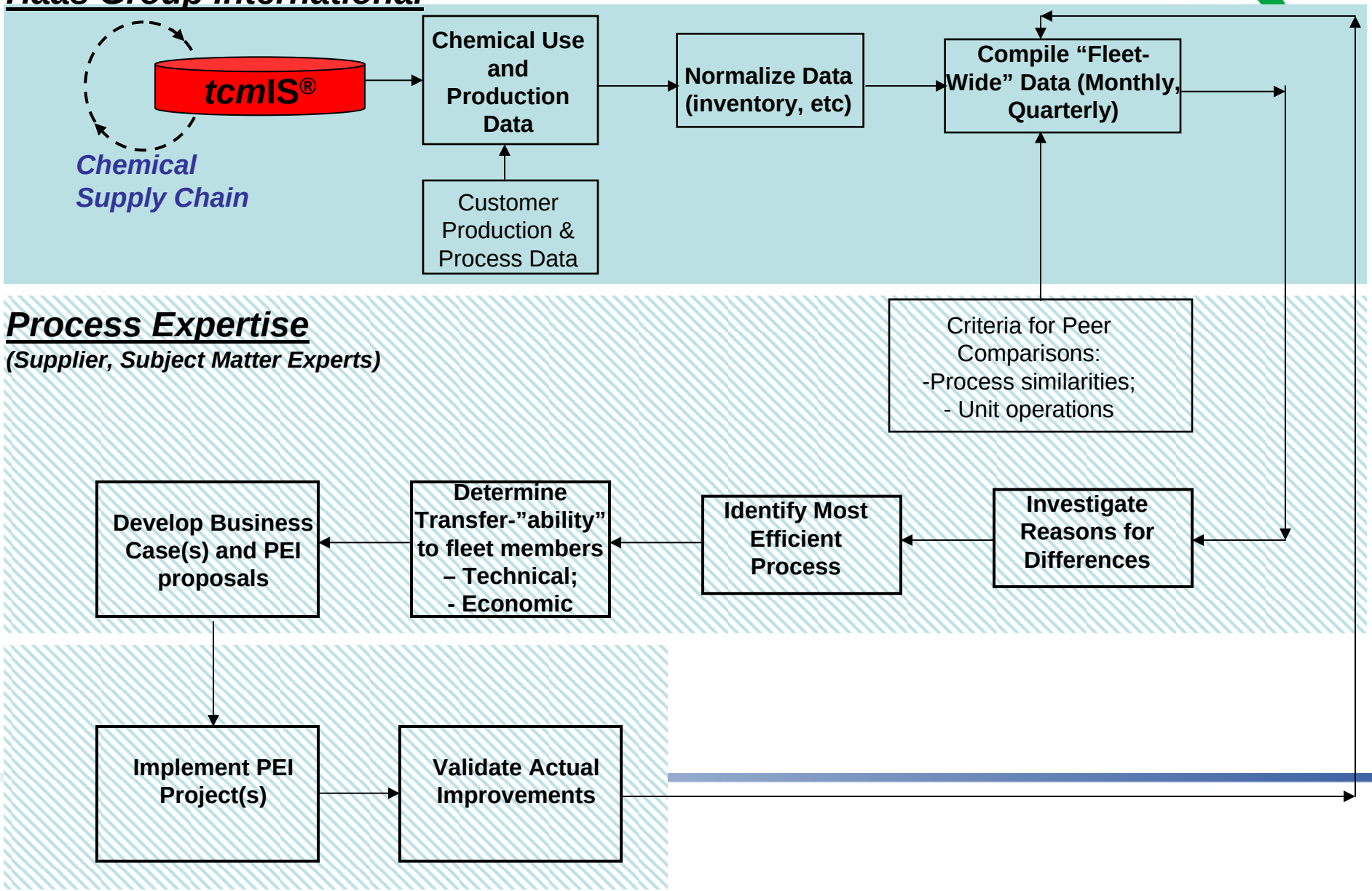
- Chemical Gatekeeping
- New Chemical Additions
- Approval Management
- Online MSDS Management
- Storage and Handling guidance
- Speciated usage
- Formatted EHS Data Reports

Business Process Streamlining

- Consolidated invoicing
- Online Financial Cost Tracking
- Customized Ad-Hoc Reporting

Chemical Efficiency Tracking and PEI Process

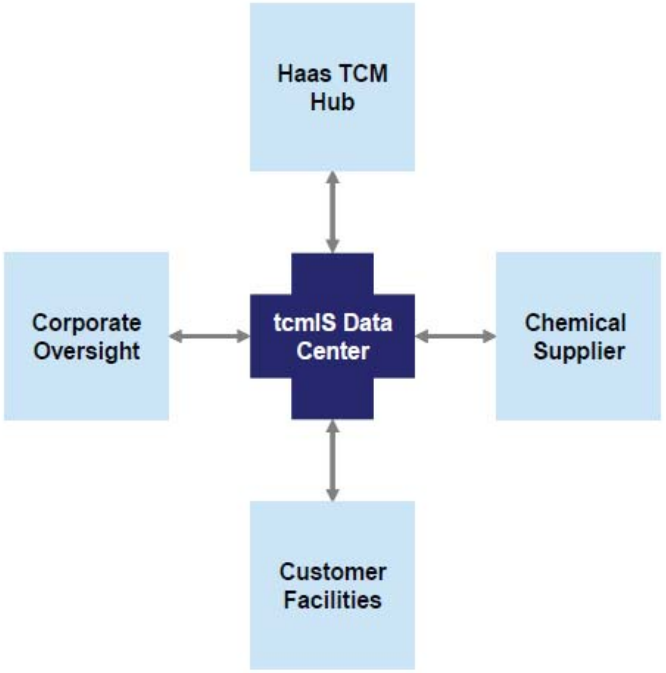
Haas Group International



Helping Monitor NRG's Environmental Footprint

*tcm*IS®

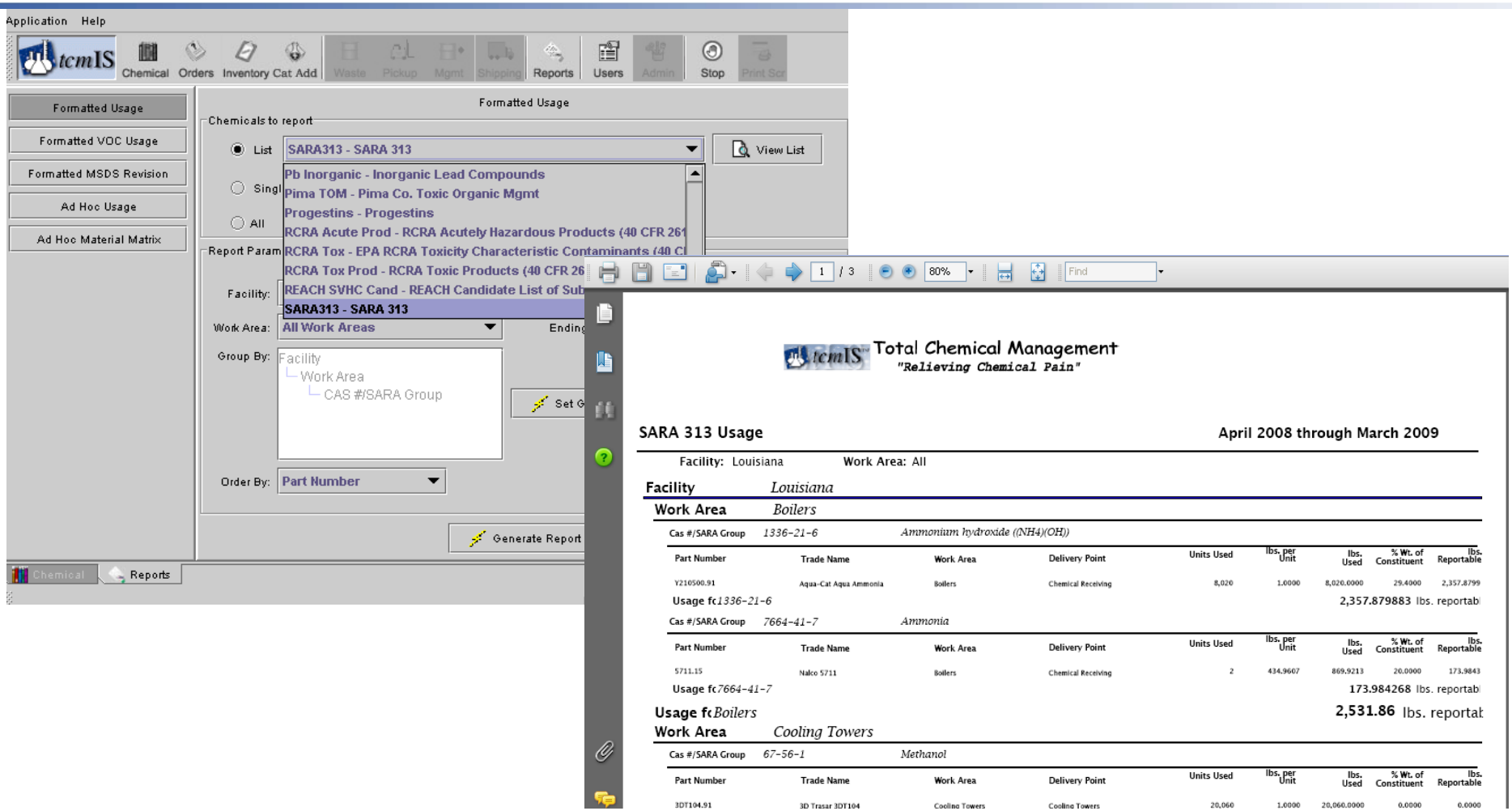
- Enterprise chemical supply chain automation platform
- Internet based
- Online access and visibility to critical supply chain data (order status, inventory, etc.)
- Online Specification and MSDS
- Chemical constituent recordkeeping and reporting (SARA and TRI)
- Cost tracking



Program Goals

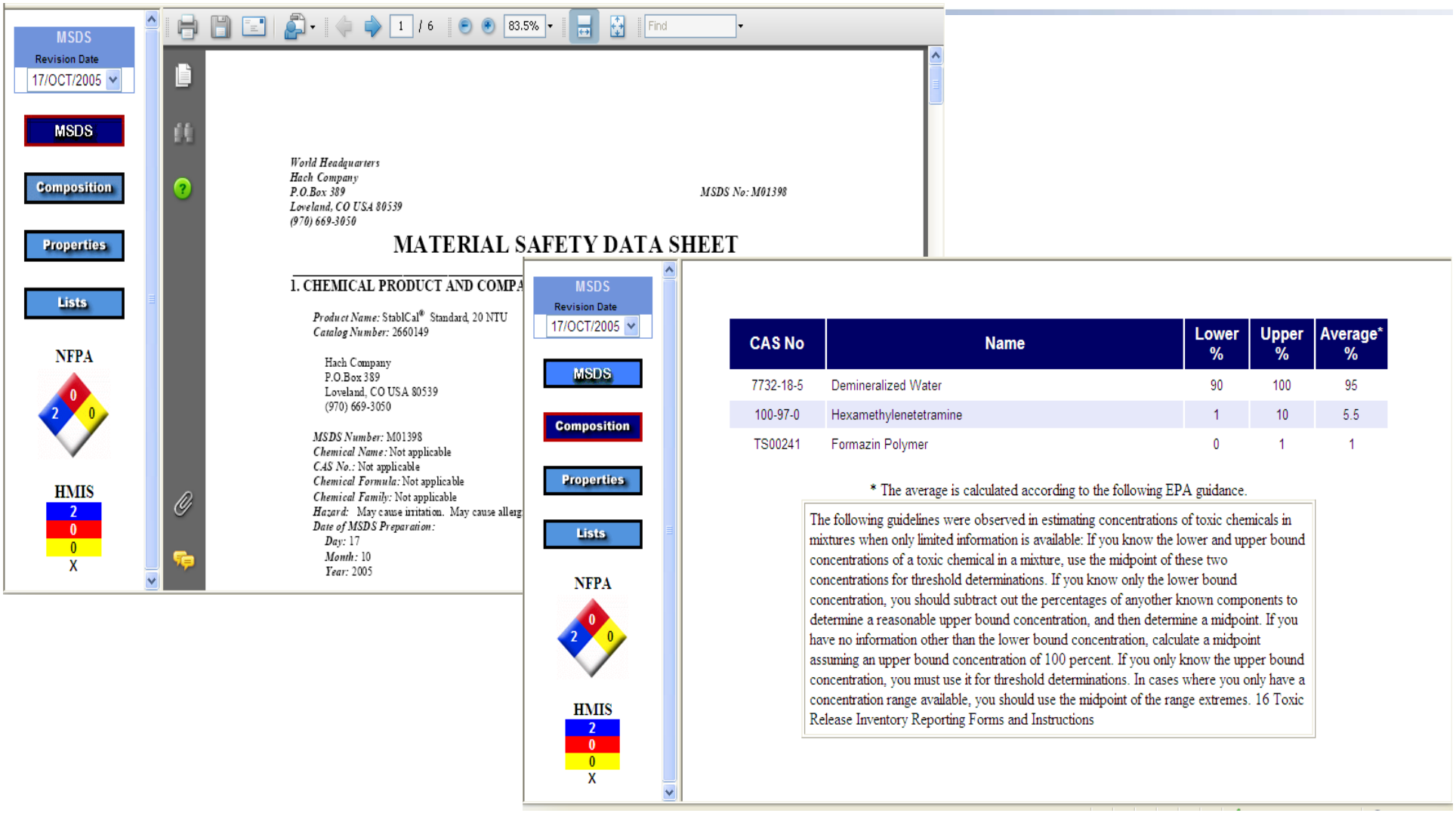
- Performance Goal: Efficient asset performance while reducing NRG's chemical environmental footprint
  - **Save $, Reduce** , Improve Quality of Life for Employees and Neighbors ☺
- *tcm*IS® platform enables:
  - Chemical Approval Chemical gatekeeping tools
  - Track and report chemical usage and chemical speciation
  - Chemical efficiency reports, to track chemical usage and cost per unit of production. Assist in identifying opportunities to share best practices throughout the fleet.
  - Ability to reduce shipments
  - Consolidated invoicing
  - Budget reports

*tcm*IS® Reporting Features



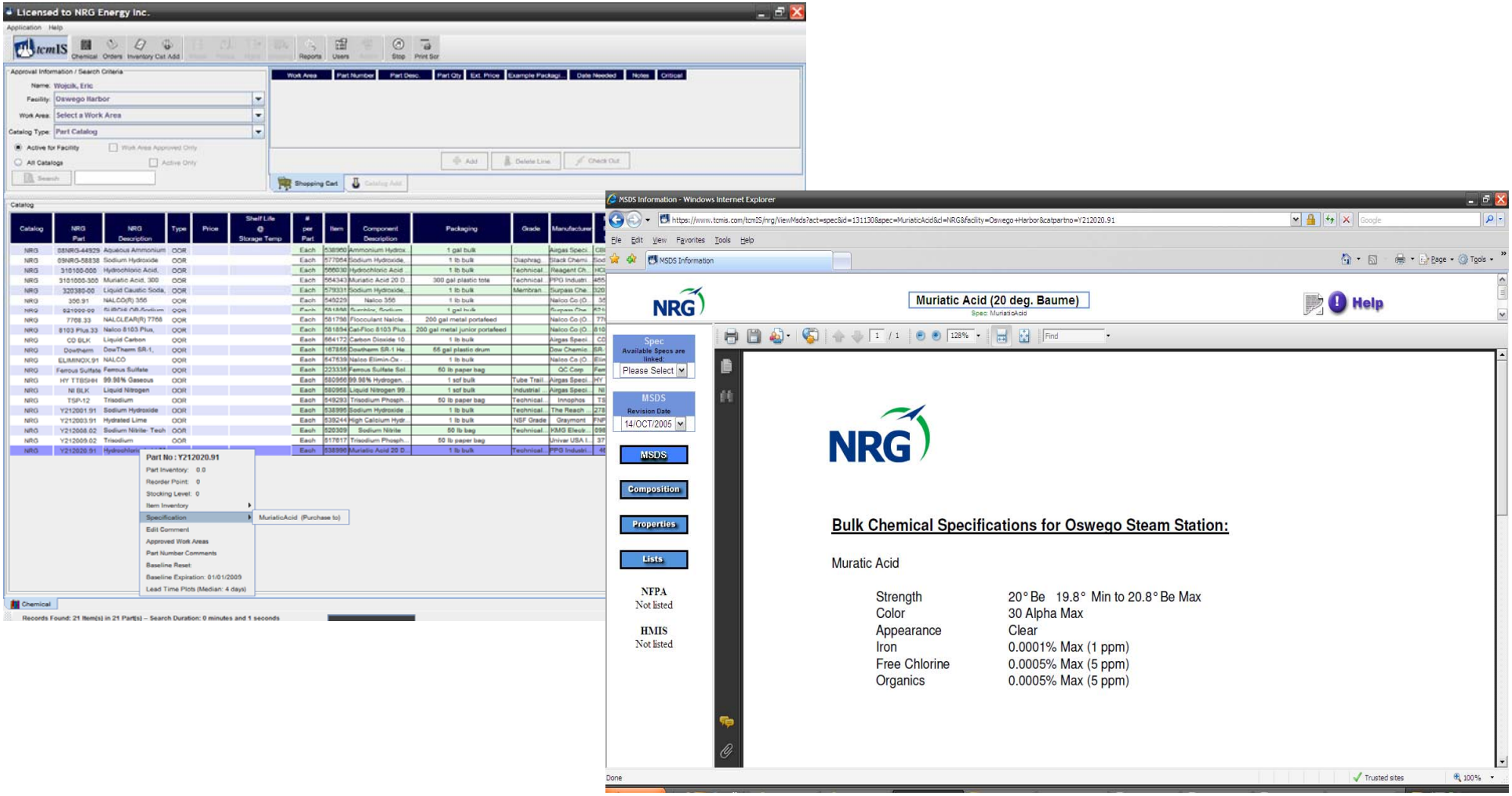
Real-time environmental reports to measure NRG's environmental footprint across the enterprise, gives the plant improved visibility to their chemical usage, and allows the user to create pre-formatted or customized reports by plant, work area, and asset

Online MSDS Management



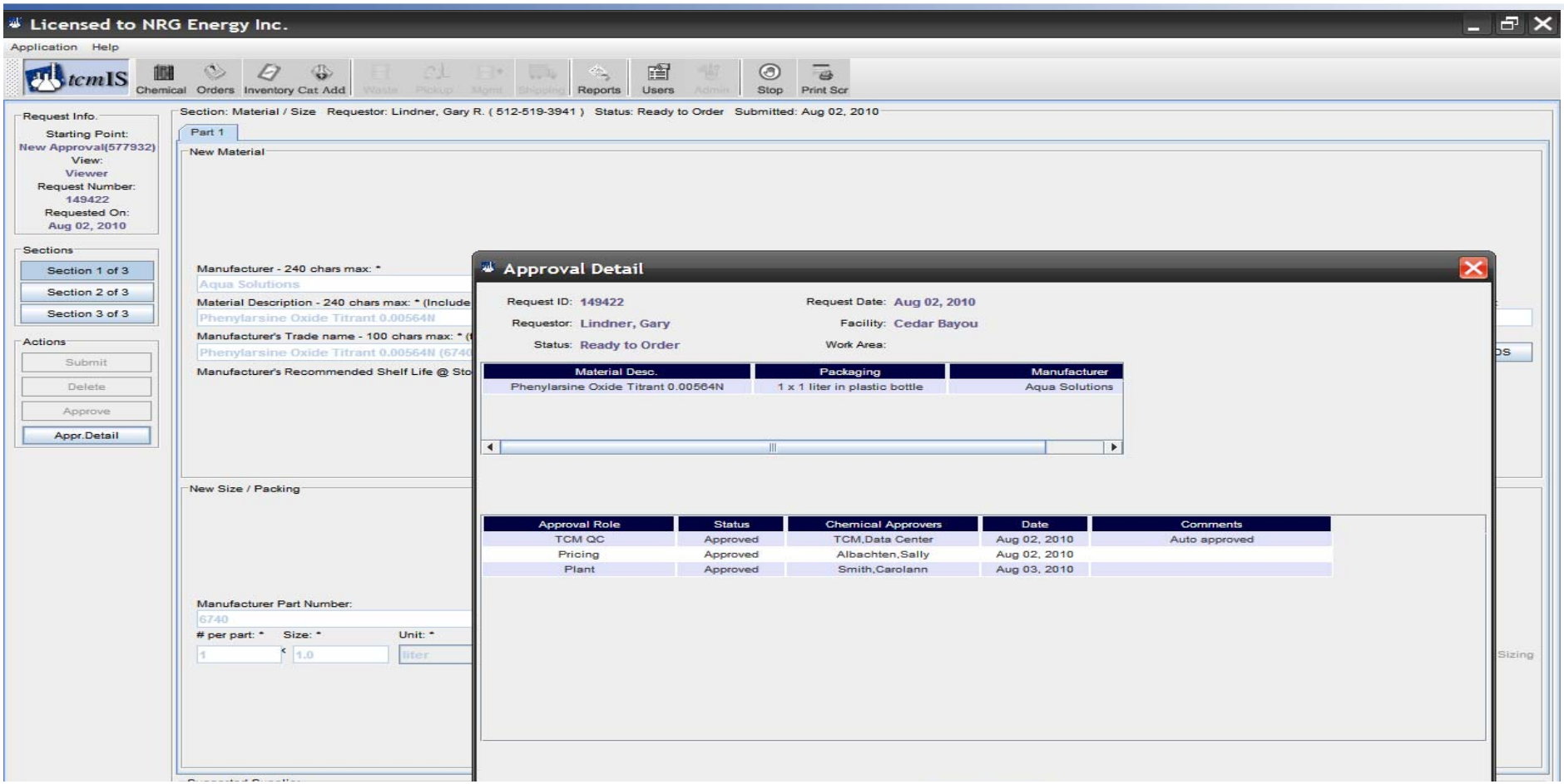
Maintains an online MSDS database of all chemicals NRG orders through *tcm*IS® , and archives previous versions of the MSDS files according to OSHA requirements. Chemical constituent data is also provided

Online Data Management-Chemical Specs



NRG's chemical specifications can be stored in their online catalog. The supplier is provided with this specification at the time a purchase order is submitted to ensure the proper material with the correct specification is delivered to the site.

Chemical Gatekeeping- Online

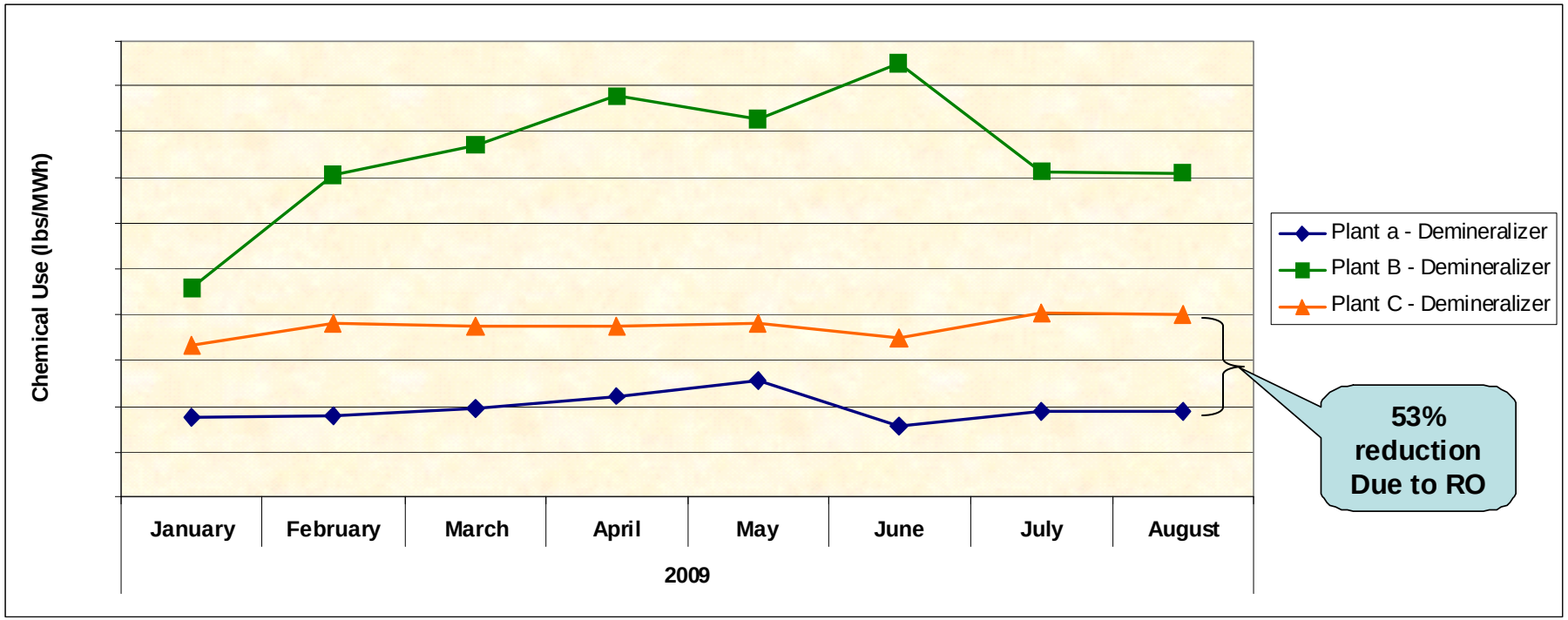


The chemical gatekeeping feature in *tcm*IS® creates an approval chain that must be followed for all new chemicals entering the plant site. Designated NRG staff must review and approve the new chemical addition before an order can be submitted. Limits can also be set on the volume or frequency of purchase for specific users and work areas, and allows the ability to require second-level approvers if necessary.

Chemical Efficiency Tracking

- Track chemical cost and use per MWh produced
- Short-term value to analyze process “trends”
- Long-term value to identify process improvement
- Share best practices throughout the fleet

Example: Sulfuric Acid Use Per MWh for Demineralization

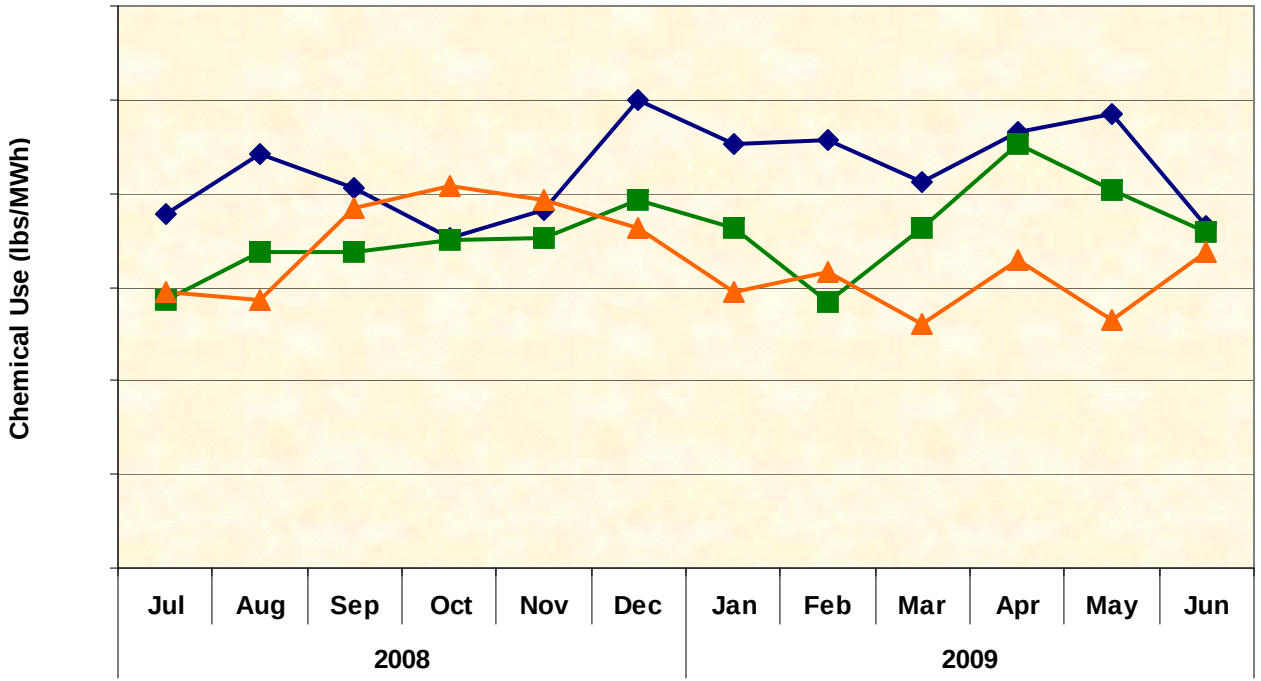


Chemical Efficiency Benchmarking

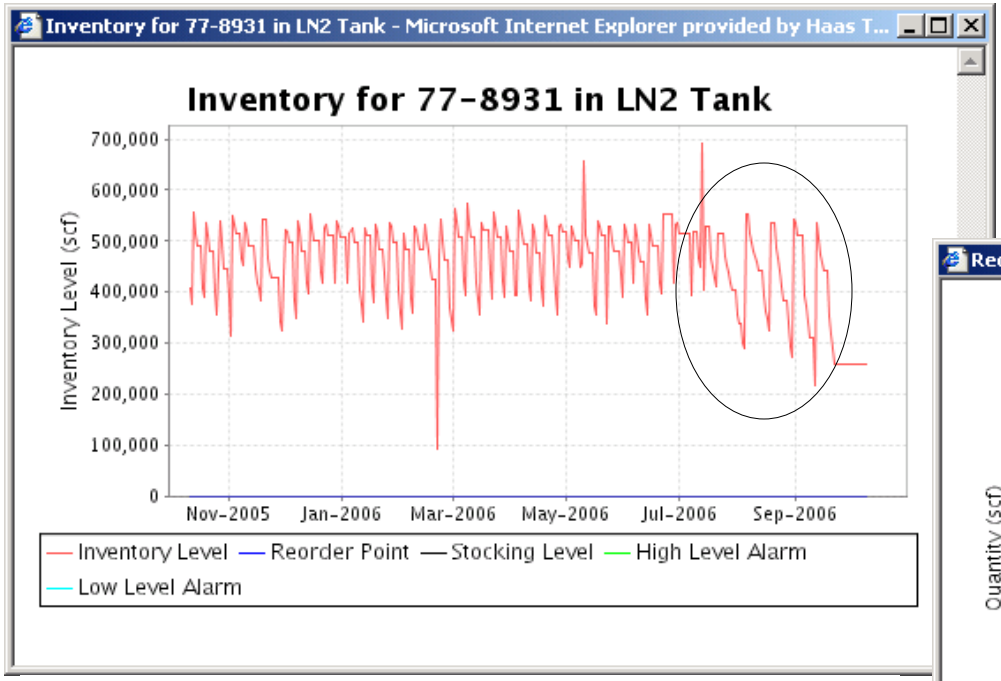
- Track and compare chemical efficiencies across industry peers
- Use “normalized” data to help drive improvement initiatives
- Help define “best practices” for chemicals use

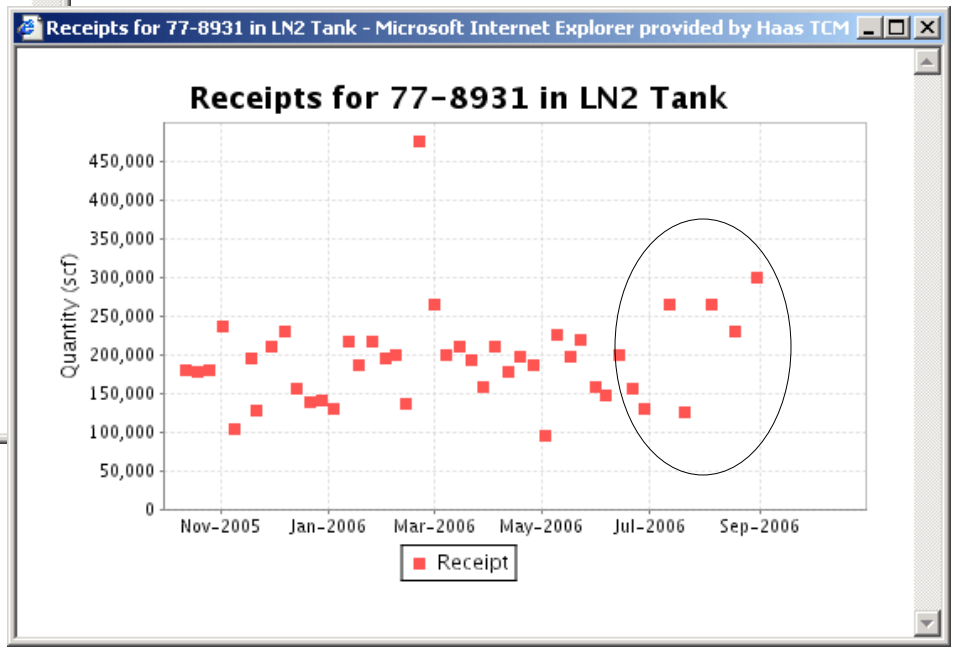
Example: Chemical Use Per MWh-Caustic for Demineralizer

NRG Plant vs. other companies



Logistical Efficiencies





Tank replenishment managed to ensure continual supply *while* reducing the number of deliveries and working within Plant high and low-level alarms.

Results: Ask the Experts

Quotes from plant and procurement employees:

"Improved safety- trained professionals visit weekly, take inventory, inspect, draft order and handle chemicals."

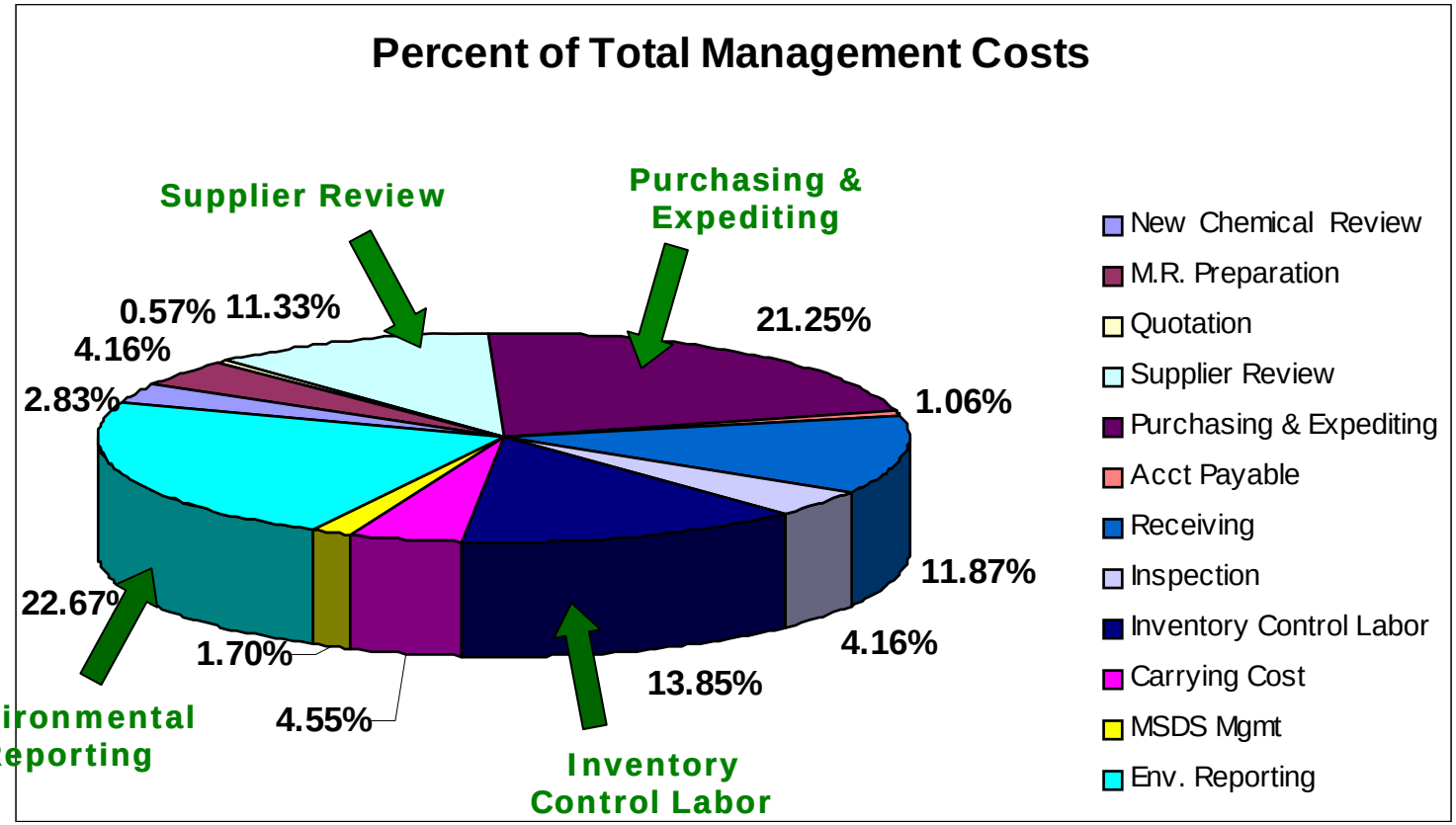
"At first I did not want to try it, but this is so much easier. Budgeting and invoicing save me a couple of days a month."

"Reduces the truck traffic to the plant, saving GHG and other pollutant emissions and having less impact on the neighbors."

"HAAS provided input in the design of chemical handling for new back end controls including WWT upgrades"

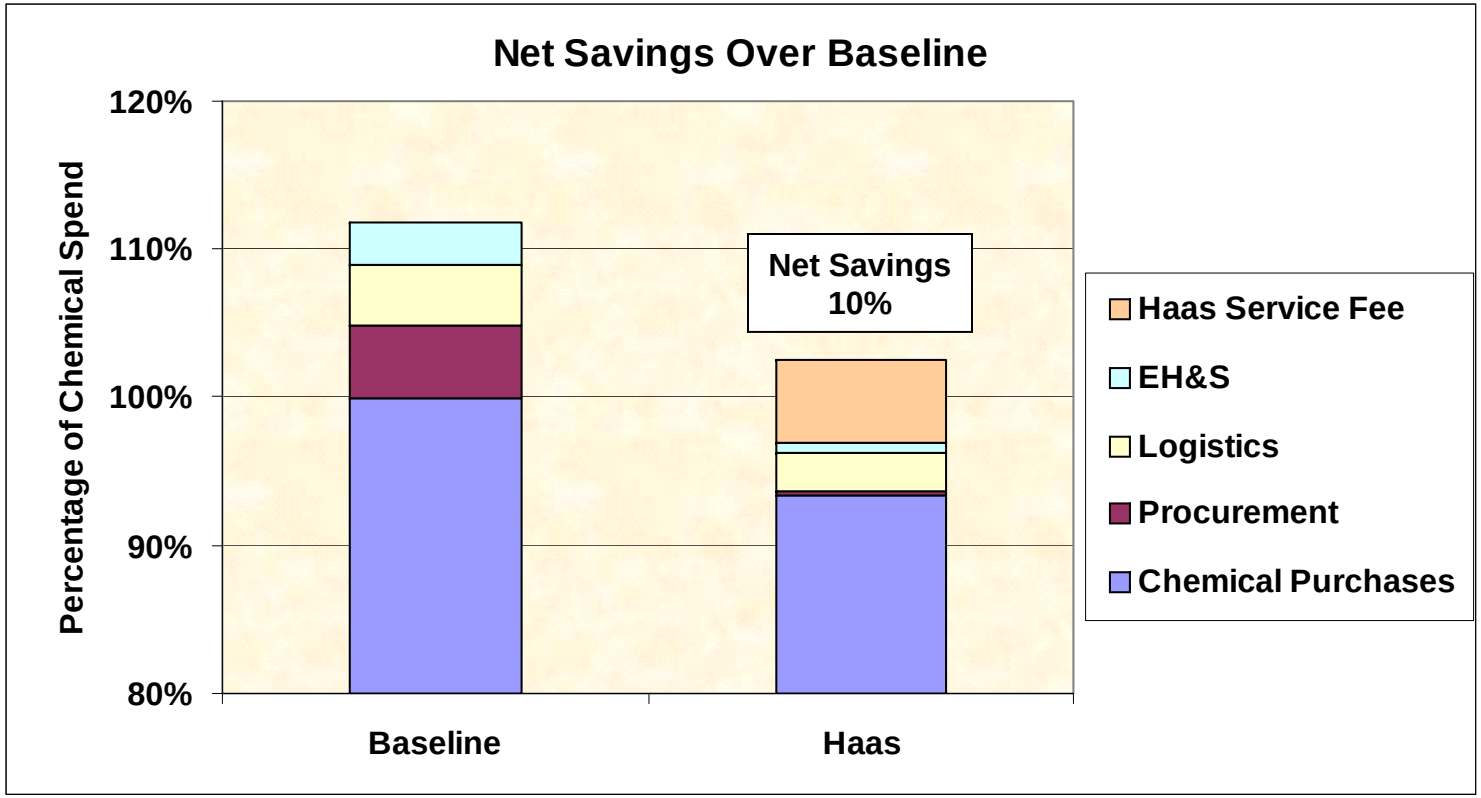
"Direct savings- about 10% annually"

NRG's Baseline Lifecycle Management Costs



Baseline lifecycle management costs were determined by monetizing the level of activity for each function

Lifecycle Chemical Management Savings



- NRG has realized an annual net savings of 8%, inclusive of the Haas service fee, for managing their chemical supply chain.
- Level of effort significantly reduced for EH&S staff due to compliance automation through the environmental reporting functions in tcmIS

Adding value to the supply chain- 2 kinds of green

Drive Sustainable Programs

Minneapolis 2008