**ALTERNATIVE
ENERGY SOURCE**

Utility Invoice Management

Sustainability Benefits and Case Studies

OVERVIEW
Utility Data Management

Utility Data Management is a cloud-based application that serves as a centralized repository for utility information. Data from utility invoices generates graphic representations of use, consumption and carbon footprint trends - all available in a straightforward dashboard.

The system tracks the sustainability information that's most useful to you and your team, highlighting areas prime for potential efficiencies and evidencing current program progress. Such data-informed decision making is a proven part of successful sustainability programs. In the end, using less energy also translates to decreased cost.

It also isolates consumption and cost anomalies to bring attention to problem areas before they can snowball. This often saves customers money through resolution of previously undetected billing errors.

In the pages that follow, you'll find a list of the benefits you can anticipate, examples of sustainability reports, and relevant success stories.

BENEFITS

UTILITY BILLING

- Bill verification and data entry.
- Invoice digital library.
- Accounting integration.
- Easy document access for audits.
- Bill processing and management.
- Usage or cost anomaly alert.

ENVIRONMENTAL

- Environmental reporting.
- Emissions tracking by meter/site.
- Cloud-based module simplified for daily tracking of environmental data.
- Assistance developing/tracking Energy Performance Indicator.
- Assistance developing/tracking Environmental Product Declaration.
- Energy Star certified energy data can be used for compliance and benchmarking.

BENEFITS

SUSTAINABILITY METRICS

- Custom reports detailing burner fuel usage and cost.
- CO_2 emissions data compilation and tracking.
- Spill prevention modules to assist in EPA compliance.
- Platform development for acceptable parameters (but/Ton, kWh/Ton).
- Plant fuel efficiency project assistance.

DATA MINING AND ANALYSIS

- Ongoing data review.
- Continuous probing for outliers.
- Metric development for quick cost and usage assessment.
- Canned and custom reports.
- On demand assimilation of multi-year data.

BENEFITS

SITE ENERGY SURVEY

- Online module to document energy appliances (motors, compressors, lights etc....) by site.
- Use information to develop replacement/upgrade avenues such as qualified rebate.
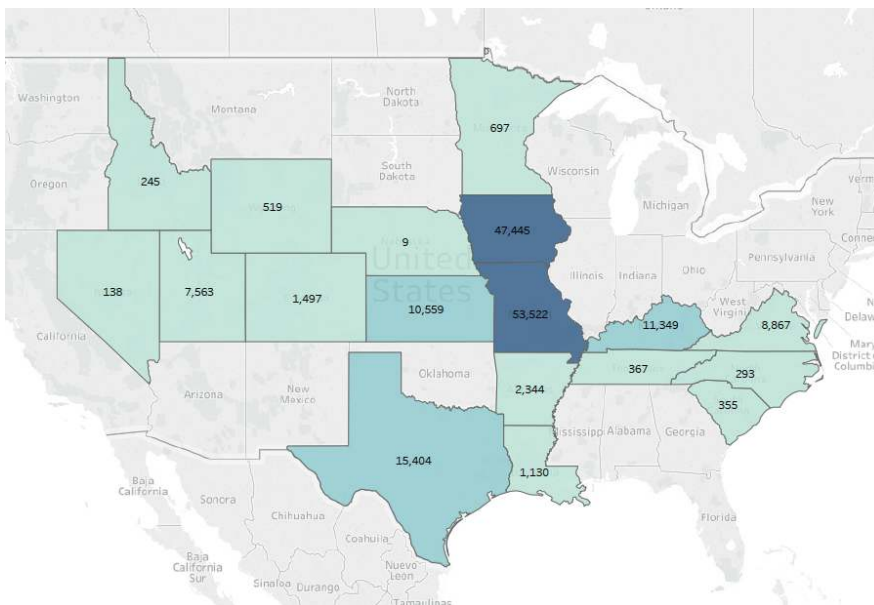- Remote metering and sub-metering applications.

CONSULTING SERVICES

- Cost optimization.
- Project management.
- Efficiency programs.
- Sustainable energy project evaluation.
- New site evaluation.
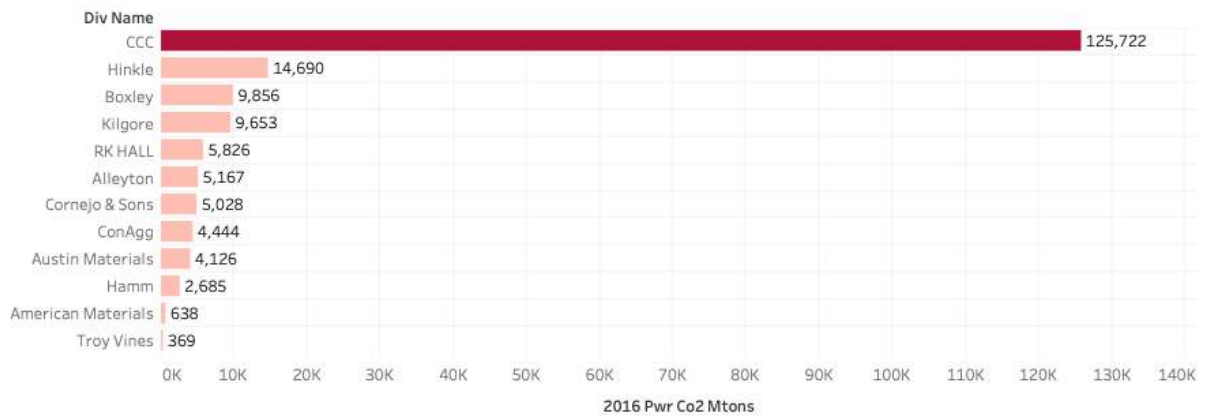
SAMPLE REPORTS

2016 CARBON OUTPUT IN METRIC TONS
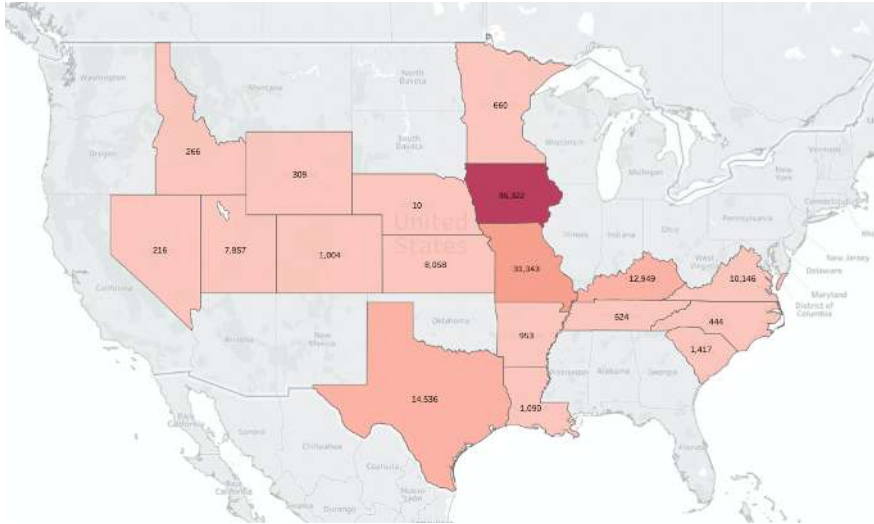
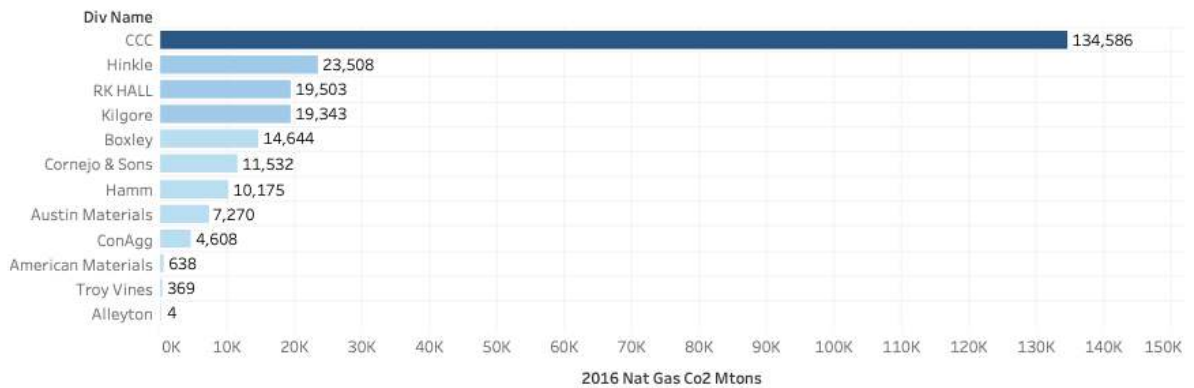
2017 CARBON OUTPUT IN METRIC TONS

SAMPLE REPORTS

2016 CO2 OUTPUT BY FUEL AND OPCO

2016 Co2 Output In Metric Tons Using Utility Generated Electric Power By OpCo

Div Name	2016 Pwr Co2 Mtons
CCC	125,722
Hinkle	14,690
Boxley	9,856
Kilgore	9,653
RK HALL	5,826
Alleyton	5,167
Cornejo & Sons	5,028
ConAgg	4,444
Austin Materials	4,126
Hamm	2,685
American Materials	638
Troy Vines	369

2016 Co2 Output In Metric Tons Using Natural Gas By OpCo

Div Name	2016 Nat Gas Co2 Mtons
CCC	134,586
Hinkle	23,508
RK HALL	19,503
Kilgore	19,343
Boxley	14,644
Cornejo & Sons	11,532
Hamm	10,175
Austin Materials	7,270
ConAgg	4,608
American Materials	638
Troy Vines	369
Alleyton	4

SUCCESS STORIES

Quarries

The great majority of the active quarries in the study generate power using diesel engines.

Additionally, at each site most earth moving equipment and machinery also is run on diesel. This adds up to a great opportunity to reduce CO_2 emissions.

Assuming the following:
1. 50 sites currently use diesel to generate power.
2. An average of 225 days of operations.
3. 500 gallons of diesel per operation day.
4. Total diesel used annually: 5,625,000 Gallons of diesel.
5. An additional 5,000,000 gallons of diesel for non-fixed engine.
6. Total diesel used: 10,625,000 gallons or,
7. CO_2 Emissions resulting: 116,369 metric tons.

If these diesel users were converted to natural gas (CNG/LNG), the resulting emissions will amount to 78,022 or a 39.5 % reduction

SUCCESS STORIES

Ready Mix Plants

In this study, the fleet of Ready Mix Plants consists of fifty plants operating in several states. Ready Mix Plants rely heavily on trucks to transport ready mix to job sites.

Most ready mix trucks operate using diesel engines. These trucks are a major contributor to the overall CO_2 emissions.

Assuming the following:
1- 40 Ready Mix Trucks per site.
2- 10,060 miles driven per tuck.
3- 1,926,000 gallons of diesel used per year.
4- Resulting CO_2 emissions: 21,094 metric tons.

If these trucks were converted to CNG, the resulting emission reduction would total 14,143 metric tons per year or a 32.9%.

SUCCESS STORIES

Hot Mix Asphalt Plants

The study organization operated approximately fifty hot mix asphalt plants. Since 2012, they converted most of their large HMAPs from recycled used oil to natural gas and has in effect caused substantial reduction in CO_2 emissions.

Consumption of RUO was reduced from 57% of total burner fuel requirements in 2012 to 28% in 2015 (YTD).

This transformation reduced CO_2 emissions from 0.02321 metric ton per ton of asphalt produced in 2012 to a current 0.01734 per ton, a reduction of 25%. There are several plants that continue to use RUO primarily due to unavailability of natural gas service.

GETTING STARTED

Next Steps

Whether you're just beginning to investigate what utility data management can bring to your company or you're ready to move forward, we're here to help.

Contact us with your questions, for pricing, or to get started.

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