

# Electronic Handbook of Industrial Resources



# Electronic Handbook of Industrial Resources **UTAH**

November 2010

## Introduction

This handbook provides a comprehensive listing of incentives, tools, and resources for industrial manufacturing energy efficiency in the state of Utah. The document is organized according to industrial system and features information on rebates, waived fees, tax credits, loans, and other resources, such as analysis tools, education and training programs, and energy assessments. The handbook is based on data available in the *States Incentives and Resources Database*, which is maintained by the U.S. Department of Energy (DOE) Industrial Technologies Program (ITP).

The *States Incentives and Resources Database* is a comprehensive searchable online database of approximately 3,100 energy efficiency incentives organized by state. The database is updated regularly and is accessible via the Save Energy Now State and Regional Partnerships' Web site:

http://www1.eere.energy.gov/industry/states/state\_activities/incentive\_search.aspx



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# State Industrial Overview

Located in the western United States, Utah has a total of 2.8 million residents, almost 80% of which are clustered around Salt Lake City leaving vast areas of land uninhabited. The state ranks 33rd in the nation in terms of GDP, which is \$109.8 billion.<sup>1</sup>

Utah has significant fossil fuel resources including large reserves of coal, oil, and natural gas. The state's residential energy consumption is led by transportation and industry, due in part to its low residential population. In 2008, Utah ranked 36th in the nation for industrial energy consumption at 224.4 trillion Btu and 33rd in the nation for industrial natural gas consumption at 56.8 trillion Btu. Utah's leading industries include petroleum and coal products manufacturing, food manufacturing, and transportation equipment manufacturing. Together, these industries are responsible for 161,324 jobs, \$1,201.6 million in payroll, and \$322,966.0 million in shipments.<sup>2</sup>

Exhibit 1 below compares the industrial energy consumption in Utah in relation to the national average. The chart in Exhibit 2 is a visual representation of the same data.

## Exhibit 1: Total Industrial Energy Consumption Statistics in Utah

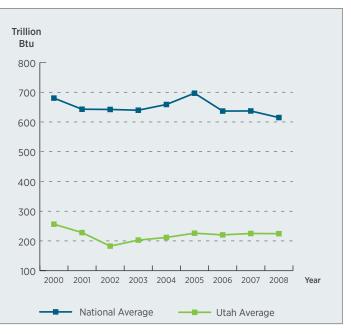
Year	Utah Energy Consumption (Trillion Btu)	National Average (Trillion Btu)
2000	256.3	680.2
2001	228.0	642.8
2002	182.6	642.0
2003	202.8	639.6
2004	211.7	658.7
2005	226.0	696.7
2006	220.3	636.6
2007	225.0	637.0
2008	224.4	614.8

Source: http://www.eia.doe.gov/emeu/states/sep\_use/ind/use\_ind\_ut.html

# Utah at a Glance

State Information			
2009 Population (Million)	2.8		
2008 GDP (Billion)	109.6		
Rank by GDP	33		
Energy Statistics			
Total Energy Consumption 2008 (Trillion Btu)	799.4		
Total Industrial Energy Consumption 2008 (Trillion Btu)	224.4		
Total Industrial Energy Consumption Rank	36		
Total Industrial Electricity Use 2008 (Trillion Btu)	31.0		
Total Industrial Electricity Use Rank	37		
Total Industrial Natural Gas Use 2008 (Trillion Btu)	56.8		
Total Industrial Natural Gas Use Rank	33		
Source: <u>http://www1.eere.energy.gov/industry/states/state_activities/</u>			

Source: <u>http://www1.eere.energy.gov/industry/states/state\_activities/</u> map\_new.asp?stid=UT



#### **Exhibit 2: Total Industrial Energy Use**

# Federal and National Industrial Energy Efficiency Programs

In addition to the state level programs outlined in more detail in section III, many government and nongovernment organizations have resources to assist industry in the western region to utilize energy more effectively. Financial and technical resources are available from federal agencies, national laboratories, utilities, utility associations, industrial organizations, energy efficiency organizations, state energy offices, energy services companies, nonprofit or nongovernmental organizations, foundations, and private companies.

ITP is one such program that provides industrial manufacturers across the country with a variety of energy efficiency tools, resources, and incentives. ITP is a prime example of DOE's commitment to improving the energy efficiency of industrial operations in the United States. ITP is a multi-faceted outreach and deployment initiative designed specifically for industrial manufacturers. ITP supports research and development of energy efficient technologies, provides industry with energy management and assessment tools, resources, and information.

Several other federal agencies offer energy efficiency incentives in addition to the multitude of DOE resources. The Internal Revenue Service, for instance, provides tax incentives to industrial manufacturers that implement energy efficiency projects. In addition, the U.S. Environmental Protection Agency provides loans on new energy efficient construction and incentives on the implementation of combined heat and power systems. Finally, the U.S. Department of Agriculture is another federal agency that provides incentives to rural and small industrial operations seeking to become more energy efficient.

## State Incentives by Industrial System

## **Building Systems**

#### Direct Contact Gas Water Heaters

Questar offers rebates for natural gas-based water heaters with a thermal efficiency greater than 90%. The rebate is calculated at \$1.10 per kBtu per hour of input.

#### For More Information: http://www.thermwise.com/business/ Business Rebates Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### Energy Efficiency Credits (Rebates)

Empire Electric passes on Energy Efficiency Credits or cash rebates to its consumers from Tri-State Generation and Transmission Association. The rebate must be requested within 180 days of installation and is available for new or replacement electric water heaters, new electric motors, and new or replacement controlled electric resistance heating units.

#### For More Information: http://www.empireelectric.org/pdf/ EEA-EEC\_Handout.pdf

Sponsor: Empire Electric Association Sponsor Type: Utility

# Energy FinAnswer—New Facilities & Major Renovations

The utility performs a detailed energy analysis and then awards rebates according to the predicted amount of energy saved. An incentive agreement is signed prior to the customer purchasing the products in question.

#### For More Information: http://www.rockymountainpower.net/ bus/se/epi/wyoming/nfmr.html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

#### Energy FinAnswer—Retrofit Projects

The utility is offering technical assistance and financial incentives to commercial and industrial customers wishing to make energy efficient retrofits. The rate of rebate is 12 cents per kWh annual savings plus \$50 per kW average monthly demand reduction, capped at 50% of construction costs.

#### For More Information:

http://www.rockymountainpower.net/ bus/se/epi/wyoming/ilc/ef.html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

#### High-Efficiency Storage Gas Heaters

Commercial customers that install natural gas tankless water heaters with less than 200,000 Btu per hour of energy input are eligible for this incentive. The rebate is set at \$2 per kBtu per hour of input.

#### For More Information: http://www.thermwise.com/business/ Business Rebates Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### High-Efficiency Tankless Gas Water Heaters

Commercial customers that install natural gas tankless water heaters with less than 200,000 Btu per hour of energy input are eligible for this incentive. The rebate is set at \$2 per kBtu per hour of input.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### Water Heater Rebate

Rebates range from \$75 for a 40-gallon water heater to \$225 for a 71-gallon (or greater) water heater.

#### For More Information:

http://www.mleainc.com/rebates.html

Sponsor: Moon Lake Electric Sponsor Type: Utility

## **Energy Sources**

#### Commercial Production Tax Credit

This tax credit is available to business owners that generate more than 660 kW of renewable energy. The credit is set at \$0.0035 per kWh of produced energy within the first four years of operation.

For More Information: http://geology.utah.gov/sep/ incentives/re\_taxcredit/pdf/ptc\_ instructions.pdf

Sponsor: Utah Geological Survey Sponsor Type: State

#### **Net Metering Policy**

The city will pay \$2,000 per kWh up to 10 kWh for commercial customers who install solar paneling.

#### For More Information: http://www.sgcity.org/wp/power/ NetMeteringBrochure.pdf

Sponsor: City of St. George Sponsor Type: Utility

# Renewable Energy Sales and Use Tax Exemption

The Utah Sales and Use Tax Exemption for Energy Related Equipment and Machinery exempts the purchase or lease of equipment used to produce renewable energy from sales tax.

#### For More Information:

http://geology.utah.gov/sep/ incentives/rincentives.htm#retaxcred

Sponsor: Utah Geological Survey Sponsor Type: State

#### Solar and Geothermal Business Tax Credit

Commercial and industrial owners are eligible for the Solar and Geothermal Business Tax Credit, which is a 10% annual corporate tax credit (up to \$25,000).

#### For More Information: http://geology.utah.gov/sep/ incentives/rincentives.htm#retaxcred

Sponsor: Utah Geological Survey Sponsor Type: State

#### **Energy Efficiency Projects**

The utility's sister company, Constellation Energy Projects & Services Group, helps commercial customers develop solutions to achieve energy goals.

#### For More Information: http://www.newenergy.com/portal/ site/menuitem.1b1af2559c566632782c 7883da6176a0

Sponsor: Constellation NewEnergy Sponsor Type: Utility

## **HVAC**

#### **Cool Keeper Program**

Rocky Mountain Power commercial customers in Utah are eligible to receive a free Cool Keeper Web-Programmable Thermostat or Cool Keeper Digital Cycling Unit.

#### For More Information:

http://www.coolkeeper.net/about\_ business.php

Sponsor: Empire Electric Association Sponsor Type: Utility

# Energy Efficiency Credits (Rebates)

Empire Electric passes on Energy Efficiency Credits or cash rebates to its consumers from Tri-State Generation and Transmission Association. The rebate must be requested within 180 days of installation and is available for new or replacement electric water heaters, new electric motors, and new or replacement controlled electric resistance heating units.

#### For More Information:

http://www.empireelectric.org/pdf/ EEA-EEC\_Handout.pdf

Sponsor: Empire Electric Association Sponsor Type: Utility

#### **High-Efficiency Gas Boilers**

Rebates are set at \$2 to \$3.25 per kBtu per hour of input.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### **High-Efficiency Gas Furnaces**

Rebates are available for natural gas furnaces with AFUE 90% or greater. Rebates range from \$200 to \$400.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### High-Efficiency Gas Unit Heaters

Rebates are available for natural gas unit heaters with thermal efficiency of greater than 90%. Rebates range from \$1.25 to \$6.00 per kBtu per hour of input

#### For More Information: http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### **Infrared Gas Heating Systems**

This rebate program applies to commercial customers that install natural gas-fired infrared-heating systems. The rebate amount is \$5 per kBtu per hour of input.

#### For More Information: http://www.thermwise.com/business/ Business Rebates Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### **Programmable Thermostat**

A \$25 rebate is available to commercial customers who install programmable thermostats in their office buildings.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### Small Commercial FinAnswer Express

The FinAnswer Express program includes incentives and technical expertise for lighting, motors, HVAC, and other equipment upgrades that increase electric energy efficiency and exceed code requirements.

#### For More Information:

http://www.rockymountainpower.net/ bus/se/epi/wyoming/sc.html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

### Industrial Systems / Process Specific

#### Business Energy Efficiency Library

This online resource is a guide for how to make Utah businesses energy efficient. This resource also provides an overview of energy efficiency, common energy-inefficient equipment, and where to find financial assistance programs.

#### For More Information:

http://www.utahefficiencyguide.com/ home.htm

Sponsor: Southwest Energy Efficiency Project Sponsor Type: Other

#### Energy Efficiency Credits (Rebates)

Empire Electric passes on Energy Efficiency Credits or cash rebates to its consumers from Tri-State Generation and Transmission Association. The rebate must be requested within 180 days of installation and is available for new or replacement electric water heaters, new electric motors, and new or replacement controlled electric resistance heating units.

#### For More Information:

http://www.empireelectric.org/pdf/ EEA-EEC\_Handout.pdf

**Sponsor:** Empire Electric Association **Sponsor Type:** Utility

#### Gas Boiler Outside Air Reset Controls

Questar offers \$250 rebates for the installation of hard-wired natural gas boiler control installations.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### Gas Boiler Tune-Up

In addition to the Gas Boiler Outside Air Reset Controls rebate, the utility is offering a financial incentive for the tune-up of existing gas-based boilers. The rebate for qualifying tune-ups is \$300 per boiler.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### **High-Efficiency Gas Boilers**

Rebates are available for natural gas furnaces with AFUE 90% or greater. Rebates range from \$200 to \$400.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### Low-Flow Pre-Rinse Spray Valves

Rebates of \$25 are available to commercial customers that install lowflow, pre-rinse spray valves that use less than 1.6 gallons per minute.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### PowerForward

In order to conserve energy on "high power" days, the PowerForward program informs Utah businesses when to use less power. Participants qualify for financial incentives.

#### For More Information: http://www.powerforward.utah.gov/

**Sponsor:** Rocky Mountain Power.

Sponsor Type: Utility

#### Small Commercial FinAnswer Express

The FinAnswer Express program includes incentives and technical expertise for lighting, motors, HVAC, and other equipment upgrades that increase electric energy efficiency and exceed code requirements.

#### For More Information:

http://www.rockymountainpower.net/ bus/se/epi/wyoming/sc.html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

#### **Energy Efficiency Projects**

The utility's sister company, Constellation Energy Projects & Services Group, helps commercial customers develop solutions to achieve energy goals

#### For More Information:

http://www.newenergy.com/portal/ site/menuitem.1b1af2559c566632782c 7883da6176a0

Sponsor: Constellation NewEnergy Sponsor Type: Utility

## Lighting

#### Small Commercial FinAnswer Express

The FinAnswer Express program includes incentives and technical expertise for lighting, motors, HVAC, and other equipment upgrades that increase electric energy efficiency and exceed code requirements.

#### For More Information: http://www.rockymountainpower.net/ bus/se/epi/wyoming/sc.html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

## Load Management

#### **Energy Audit**

Commercial and residential customers are eligible for energy audits of homes or office buildings. Audits will identify areas that could be more energy efficient, as well as suggested improvements.

#### For More Information http://www.empireelectric.org/ services1.html

**Sponsor:** Empire Electric Association **Sponsor Type:** Utility

#### **Energy Exchange**

Energy Exchange is a voluntary load reduction program designed for customers with at least one MW of connected load. Customers in the program are contacted to reduce usage at certain times due to power supply issues. In turn, the utility will pay the company money for the reduced energy use.

#### For More Information:

http://www.rockymountainpower.net/ bus/se/epi/idaho/lc.html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

#### Energy FinAnswer-Retrofit Projects

The utility is offering technical assistance and financial incentives to commercial and industrial customers wishing to make energy efficient retro fits. The rate of rebate is 12 cents per kWh annual savings plus \$50 per kW average monthly demand reduction, capped at 50% of construction costs.

#### For More Information: http://www.rockymountainpower.net/ bus/se/epi/wyoming/ilc/ef.html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

#### Gas Boiler Tune-Up

In addition to the Gas Boiler Outside Air Reset Controls rebate, the utility is offering a financial incentive for the tune-up of existing gas-based boilers. The rebate for qualifying tune-ups is \$300 per boiler.

#### For More Information: http://www.thermwise.com/business/ Business Rebates Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### Industrial Assessment Center (IAC): Oregon State University

Small- and medium-sized manufacturers that meet Oregon State University requirements are eligible receive a free energy assessment within about 150 miles of the campus.

#### For More Information:

http://eec.engr.oregonstate.edu/ industrial.htm

**Sponsor:** U.S. Department of Energy **Sponsor Type:** Utility

#### PowerForward

In order to conserve energy on "high power" days, the PowerForward program informs Utah businesses when to use less power. Participants qualify for financial incentives.

#### For More Information:

http://www.powerforward.utah.gov/

Sponsor: Rocky Mountain Power Sponsor Type: Utility

#### **Programmable Thermostat**

A \$25 rebate is available to commercial customers that install programmable thermostats in office buildings.

#### For More Information:

http://www.thermwise.com/business/ Business\_Rebates\_Brochure.pdf

Sponsor: Questar Gas Sponsor Type: Utility

#### U.S. Department of Energy Industrial Assessment Center (IAC): Colorado State University

The Colorado State University IAC provides free plant assessments and recommendations within about 150 miles of the campus for improved energy efficient operations. These services are offered to the following states: Colorado, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Utah, and Wyoming.

#### For More Information: http://www.engr.colostate.edu/IAC/

Sponsor: U.S. Department of Energy Sponsor Type: Federal

#### Constellation NewEnergy Online

This is an energy-management tool that is available to all electricity customers free of charge. The tool allows customers to find opportunities to improve a company's energy efficiencies, track changes in a company's usage, and compare usage across multiple facilities.

#### For More Information:

http://www.newenergy.com/portal/ site/menuitem.987b194dd5e782ce18a8 05e4da6176a0

Sponsor: Constellation NewEnergy Sponsor Type: Utility

#### **Energy Efficiency Projects**

The utility's sister company, Constellation Energy Projects & Services Group, helps commercial customers develop solutions to achieve energy goals.

#### For More Information:

http://www.newenergy.com/portal/ site/menuitem.1b1af2559c566632782c 7883da6176a0

Sponsor: Constellation NewEnergy Sponsor Type: Utility

#### Load Response for your Business

Commercial customers can receive financial rewards, either in the form of dollars or energy bill credits, for using less energy on days when regional power grids are under stress.

#### For More Information:

http://www.newenergy.com/portal/ site/menuitem.c2d5c4a31e3b3661571c 5010747176a0?title=Ir

Sponsor: Constellation NewEnergy Sponsor Type: Utility

### Industrial Systems General

#### **Energy Audit**

Commercial and residential customers are eligible for energy audits of homes or office buildings. Audits will identify areas that could be more energy efficient, as well as suggested improvements.

For More Information: http://www.empireelectric.org/ services1.html

Sponsor: Empire Electric Association Sponsor Type: Utility

#### Industrial Assessment Center (IAC): Oregon State University

Small- and medium-sized manufacturers that meet Oregon State University requirements are eligible receive a free energy assessment within about 150 miles of the campus

#### For More Information:

http://eec.engr.oregonstate.edu/industrial.htm

Sponsor: U.S. Department of Energy Sponsor Type: Federal

#### **Recommissioning Program**

The utility provides a complete energy audit of a facility to identify ways to make existing systems more energy efficient. The auditor will also make suggestions for upgrading equipment that is eligible for rebates.

#### For More Information:

http://www.rockymountainpower.net/ bus/se/epi/utah/ilc/recommissioning. html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

#### Self-Direction Credit Program

This program is targeted to large commercial and industrial customers in Utah. The utility enables those customers to fund projects at facilities to reduce energy consumption. Once these systems are implemented, customers will receive a credit on utility bills that will offset the Customer Efficiency Service Charge.

## For More Information: <a href="http://www.rockymountainpower.net/">http://www.rockymountainpower.net/</a>

bus/se/epi/utah/ilc/sdc.html

Sponsor: Rocky Mountain Power Sponsor Type: Utility

#### State Energy Program Grant

Grants are available to Utah businesses that teach other Utah businesses, organizations, or residents about energy efficiency and conservation.

#### For More Information: http://geology.utah.gov/sep/ incentives/formula\_grant/index.htm

Sponsor: Utah Geological Survey Sponsor Type: State

#### U.S. Department of Energy Industrial Assessment Center (IAC): Colorado State University

CThe Colorado State University IAC provides free plant assessments and recommendations within about 150 miles of the campus for improved energy efficient operations. These services are offered to the following states: Colorado, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Utah, and Wyoming.

#### For More Information:

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#### Constellation NewEnergy Online

This is an energy-management tool that is available to all electricity customers free of charge. The tool allows customers to find opportunities to improve a company's energy efficiencies, track changes in a company's usage, and compare usage across multiple facilities.

#### For More Information:

http://www.newenergy.com/portal/ site/menuitem.987b194dd5e782ce18a8 05e4da6176a0

Sponsor: Constellation NewEnergy Sponsor Type: Utility

#### **Energy Efficiency Projects**

Constellation Energy Projects Services provides solutions designed to achieve energy goals and promote a sustainable future by offering an extensive array of products and services.

#### For More Information:

http://www.newenergy.com/portal/ site/cne/menuitem.1b1af2559c5666327 82c7883da6176a0

Sponsor: Constellation NewEnergy Sponsor Type: Utility

#### **Energy Efficiency Projects**

The utility's sister company, Constellation Energy Projects & Services Group, helps commercial customers develop solutions to achieve energy goals.

For More Information: http://www.newenergy.com/portal/ site/menuitem.1b1af2559c566632782c 7883da6176a0

Sponsor: Constellation NewEnergy Sponsor Type: Utility

# End Notes

- <sup>1</sup> "Save Energy Now State Partnerships: ITP Activities in Montana." The Office of Energy Efficiency and Renewable Energy (EERE). <u>http://www1.eere.energy.gov/industry/states/state\_activities/map\_new.asp?stid=UT</u>
- <sup>2</sup> U.S. Energy Information Administration, "State/Territory Energy Profiles," Accessed October 4, 2010. <u>http://tonto.eia.doe.gov/state/state\_energy\_profiles.cfm?sid=UT</u>.
- <sup>3</sup> Energy Information Administration, "Table 2. 2005 State Emissions by Sector (Million Metric Tons of Carbon Dioxide)." <u>http://www.eia.doe.gov/oiaf/1605/ggrpt/excel/tbl\_statesector.xls</u>.

EERE Information Center 1-877-EERE-INFO (1-877-337-3463) www.eere.energy.gov/informationcenter



Energy Efficiency & Renewable Energy