

# 2010 Compressed Air Rebate

## ***Instructions for completing the NE&C COMPRESSED AIR Rebate Worksheet***

### **General Notes:**

1. A vendor proposal is required for a rebate and must include the Compressed Air Plant Proposal Information found in these instructions.
2. The Compressed Air Rebate must be completed and the rebate approved prior to purchasing and installing the equipment.
3. Compressors under 15 HP are not eligible for rebates.
4. Compressors over 75 HP are not eligible for a prescriptive rebate but may be eligible for a Custom Rebates.
5. Invoices will be required for payment of rebates.
6. The rebate, in conjunction with all other sources of funding, cannot exceed the total project cost.

### **Eligibility Requirements:**

To be eligible for rebates, the equipment must meet the following requirements:

#### **Compressors**

1. Nameplate horsepower of compressors must be equal to or greater than 15 HP and less than or equal to 75HP. Compressors with manufacturers ratings only in kilowatts will be assumed to have horsepower ratings equal to Compressor *kW* rating (motor only) / .746.
2. Prescriptive rebates are only applicable to single compressor systems. Multiple compressor systems of any size that serve a common distribution system may submit applications as a Custom Rebate Project. Projects that have multiple and comprehensive measures may be processed as a Custom Rebate.
3. Prescriptive rebates are only applicable to compressors with an operating pressure of 145 psi or below. Compressors with higher operating pressures may be processed as a Custom Rebate.
4. Prescriptive rebates are only applicable to oil flooded Rotary Screw Compressors. Other compressor types may be eligible for a rebate as a Custom Rebate Project.
5. Compressor control shall be: Load/No Load (L/NL), Variable Speed Drive (VSD) or Variable Displacement (VD).
6. Compressors must operate a minimum of 2000 hours a year.
7. Check with your utility representative for power quality or harmonics requirements for compressors with VFD's

#### **Storage**

1. Primary storage is required on all compressors receiving rebates.
2. Rebates are only available for air storage tank(s) in association with new compressor equipment installations.
3. Rebates for additional air storage on an existing system may be eligible and applied for under the custom rebate.

#### **Dryers**

1. Dryers equal to or less than 500 CFM are eligible for prescriptive rebates. Dryers between 500CFM and 1000CFM may qualify at the discretion of the Utility Company's technical staff. Other dryers may be eligible under the Custom Rebate.
2. Dryers shall be the refrigerated "thermal mass" cycling design type sized to match compressor capacity. VSD dryers also qualify.
3. Dryers must operate a minimum of 2000 hours a year.

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### Calculation of Rebates

1. Refer to the back side of the rebate application entitled “**NE&C Compressed Air Rebate Worksheet**” to determine the following rebates as applicable:

### Air Compressor Rebate

1. Enter air compressor nominal horsepower (from manufacturer’s data) in column (A).
2. Enter the air compressor capacity (acfm). (manufacturers rating at the actual compressor operating pressure.)
3. Enter the compressor control code found in Table “**1 Compressor Control Codes & Storage Requirements.**”
4. Enter if additional storage is to be provided (yes or no).
5. Enter Rebate (\$) per HP in column (B) found in Table “**2 High Efficiency Air Compressor Rebate per HP.**”
6. To calculate the air compressor rebates multiply the Compressor Horsepower from column (A) by the Rebate per HP from column (B).

### Additional Primary Storage Rebate

1. In column A, calculate the “Minimum Storage Required” (gals) by multiplying the “Minimum Gallons per CFM” for the compressor type found in “**1 Compressor Control Codes & Storage Requirements.**” Table by the cfm noted in the Compressor Rebate Calculation.
2. In column B, calculate the “Maximum Storage Eligible” (gals) by multiplying the “Maximum Gallons per CFM” for the compressor type found in “**1 Compressor Control Codes & Storage Requirements.**” Table by the cfm noted in the “Compressor Rebate Calculation”.
3. In column C enter any existing storage (gals)
4. In column D, calculate the “Minimum New Storage Required” (gals) by subtracting the “Minimum Storage Required”, column A from the “Existing Storage”, column C.
5. In column E, calculate the “Maximum New Storage Eligible” (gals) by subtracting the “Maximum Storage Eligible”, column B from the “Existing Storage”, column C.
6. In column F, enter the “Storage to be installed” (gals)
7. To calculate the storage rebate multiply the “Storage to be installed”, column F by \$2.75/gal. Note that the gallons stated in “Storage to be installed”, column F can not exceed the “Maximum New Storage Eligible”, column E.

### Dryer Rebate Calculation

1. Enter dryer capacity (CFM) in column (A).
2. Enter dryer type (VSD or Cycling) in the next column.
3. Enter the annual hours of operation for the dryer in the third column.
4. Enter the Rebate per CFM from Table “**3 High Efficiency Dryer Rebate per CFM.**”
5. Calculate the dryer rebate by multiplying the Dryer Capacity from column (A) by the Rebate per CFM from column (B).

### Total NE&C Compressed Air Rebate

1. Calculate the total rebate by summing the Air Compressor, Storage and the Dryer rebates.

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**Post-Installation:**

***Utility Representative must verify that:***

1. The single compressor has been installed and operating as follows:
  - a. System operating pressure \_\_\_\_\_ psi
  - b. Original primary storage capacity \_\_\_\_\_ gallons
  - c. Additional primary storage capacity \_\_\_\_\_ gallons
  - d. Total primary storage capacity \_\_\_\_\_ gallons
  - e. Final gallons per compressor CFM \_\_\_\_\_
  - f. If VFD, have harmonic requirements been met? Yes \_\_\_ No \_\_\_
2. The compressor matches the Compressor Rebate Application information. If the equipment has changed from what was approved for the initial rebate offer, the substituted equipment specifications must be submitted and reviewed by the utility to verify compliance with technical requirements and approved before a rebate is considered.
3. The invoice or proof of payment has been submitted.
4. The Utility Representative & Customer have signed / dated the post installation inspection block on the rebate form.

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## COMPRESSED AIR PLANT PROPOSAL INFORMATION

The following information must be included in the proposal requesting a rebate. Please describe the major components of the existing compressor and compressed air system.

Existing Compressor Description (Manufacturer & Model)	Rated HP & cfm	Operating psi	Control Type	Hours/Wk	Annual Hours	Loading Hours/Wk (% CFM)
Ex: Gardner Denver Modulating 50 HP Model: #ABCDEF	50hp 220CFM	110 psi	Mod	100 hrs	5,200 hrs/yr	10hr@90% 30hr@30% 50hr@60%
1.						
2.						

Proposed Compressor Description (Manufacturer & Model)	Rated HP & acfm	Operating psi	Control Type	Hours/Wk	Annual Hours	Loading Hours/Wk (% CFM)
Ex: Gardner Denver Modulating 50 HP Model: #ABCDEF	50hp 220CFM	110 psi	Mod	100 hrs	5,200 hrs/yr	10hr@90% 30hr@30% 50hr@60%
1.						

The following information for existing equipment should be included in the proposal:

**Compressor**

How many shifts \_\_\_\_\_ and how does production vary \_\_\_\_\_

What is the current system pressure at the furthest point from the compressor \_\_\_\_\_ psi

What is the minimum pressure required for proper equipment operation \_\_\_\_\_ psi

Any significant operational problems

- Inadequate pressure    Yes  No
- Moisture or air quality    Yes  No
- Production problems due to pressure fluctuations    Yes  No
- Other \_\_\_\_\_

Compressor Type & Age Unit 1 \_\_\_\_\_ Unit 2 \_\_\_\_\_

Compressor Cooling Medium (air, chilled water) \_\_\_\_\_

Number of Condensate Drains \_\_\_\_\_ Type \_\_\_\_\_ Timer Settings \_\_\_\_\_

**Dryer**

Dryer Type: Desiccant \_\_\_\_\_ Refrigerant \_\_\_\_\_ None \_\_\_\_\_

Dryer Capacity (CFM) \_\_\_\_\_

**Leak Identification and Remediation**

Date of Last Leak Survey if Any \_\_\_\_\_

Survey Provider and Survey Type (eg ultrasonic) \_\_\_\_\_

Estimate Leak Level from Survey \_\_\_\_\_

Follow-up Leak Remediation Efforts \_\_\_\_\_

For Compressed Air Challenge technical and training information please visit <http://www.knowpressure.org>