



#### **APPLICATION INSTRUCTIONS**

Fill out Steps 1-3 and submit to your utility provider. Do not sign Steps 5-6 until instructed by your utility provider.

STEP 1 CUSTOMER INFORMATION			
Select your utility company:  Eversource Liberty NH Elect	tric Co-op 🛛 Unitil	Date:	
Electric Account #:	Natural Gas Account		
Company Name:	Contact Person:		
Phone Number:	Contact Email:		
Installation Address:	City:	State:	Zip:
Mailing Address:	_ City:	State:	Zip:
STEP 2 CONTRACTOR INFORMATION (if self-installed leave	e blank)		
Contractor Company (if applicable):	Contact Person:		
Mailing Address:	City:	State:	Zip:
Contact Phone:			
STEP 3 PAYEE INFORMATION			
Check Payable to: Customer Contractor Other	Payment To:		
Mailing Address:	City:	State:	Zip:
LIBERTY CUSTOMERS ONLY – Signature (for payment to Contract	or/Other):		
STEP 4 RETURN APPLICATION TO UTILITY REPRESENTA	TIVE		
Send to your utility representative or email to your utility here:			
Eversource: efficiencynh@eversource.com	Liberty: nhsaves@lib	ertyutilities.com	
New Hampshire Electric Co-op: solutions@nhec.com	Unitil: efficiency@uni	til.com	
STEP 5 PRE APPROVAL OFFER			
<b>STOP</b> Once you have received Utility Pre-approval notification, sig and Program Terms and Conditions.	gn below accepting ince	ntive offer, payment	t arrangement,
Utility Signature:	Date:		
Amount Of Incentive:	Valid Through:		
CUSTOMER SIGNATURE:	Date:		
STEP 6 PROJECT COMPLETION			
<b>STOP</b> Sign below to indicate that project is completed. Send final Final Incentive calculated based on 'as-installed' conditions.	l signed application to Ut	ility.	
Utility Signature:	Date:		

Utility Signature:	Date:
CUSTOMER SIGNATURE:	Date:
Final Project Cost:	Final Incentive Amount:

Powered by:







November 1, 2024

	NE&C VFD INCENTIVE WORKSHEET							
ITEM	MOTOR HP	Fan or Pump Id	AREA SERVED	APPLICATION CODE <sup>1</sup>	CONTROL PARAMETERS <sup>2</sup>	MOTOR EFFICIENCY	ANNUAL HOURS OF OPERATION <sup>3</sup>	INCENTIVE (\$)4
Ex.	10	AC-2	Atrium	HWP	DT	91%	5,400	\$1,000
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
Vendo	r quote or pro	posal require	d for Incentive.				TOTAL	

#### <sup>1</sup>FAN OR PUMP APPLICATION CODE

CODE	APPLICATION	MAX HP
HWP	Heating hot water circulator pump	<7.5
WWP	Circulation pump for water source heat pump loop	<5
FWP	Boiler feed water pump	<15
CWP	Condensate water pump	<7.5
CHWP	Chilled water pump	<7.5
BDF	Boiler draft fan	<25
CTF	Cooling Tower Fan-Single speed only	<5

<sup>2</sup> CONTROLLING PARAMETERS
Pressure Differential
Temperature Differential

INCENTIVES					
HP CONTROLLED BY EACH VFD	MAXIMUM INCENTIVES (\$)				
1 – 3	\$800				
5 – 7.5	\$900				
10	\$1,000				
15	\$1,125				
20	\$1,575				

## FACILITY TYPE (CHECK ONE)

College/University
 Warehouse
 School K-12
 Restaurant

Multi-FamilyRetailHotel/Motel

Grocery

Health Care
 Offices

<sup>1</sup>Other VFD applications may be eligible for a Custom Incentive.

<sup>2</sup>VFD's installed are modulated automatically based on downstream information.

<sup>3</sup>VFD's must operate a minimum of 2,000 hours per year to be eligible for an Incentive.

Specify

<sup>4</sup>Motors and drives greater than 20 HP or for industrial purposes should use the custom application pathway.



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# 2025 Variable Frequency Drive New Equipment & Retrofit



#### Instructions for completing the NE&C VARIABLE FREQUENCY DRIVE Incentive Worksheet

#### **General Notes:**

- 1. A vendor proposal is required for an Incentive. The Variable Frequency Drive (VFD) Installation Information, page 5 may also be required.
- 2. VFDs offer a method of significantly reducing the energy consumed by fans, centrifugal pumps, and other motor-driven machinery operated under varying loads. For VFD applications not covered here, use the Custom Incentive Application.
- 3. Systems must have varying load operations such as variable flow, temperature or pressure regulation. Fan and pump operations that would otherwise be regulated by on/off cycling are not eligible for VFD incentives. Systems with constant speed and variable load operations (such as conveyors) are not eligible for VFD incentives.
- 4. Check with your specific utility for any harmonics or power quality requirements.
- 5. If power factor correction capacitors are present, they could be adversely affected by the VFD. The customer's design engineer should address this issue.
- 6. Invoices are required for payment of Incentives.
- 7. The Incentive, in conjunction with all other sources of funding, cannot exceed the total project cost.

#### **Eligibility Requirements:**

- 1. Eligibility requirements can be found in the "Fan or Pump Application Code" box above.
- 2. Fans / pumps motors must operate a minimum of 2,000 hours a year.
- 3. Applicants must demonstrate significant load diversity that will result in savings through motor speed variation.
- 4. The VFD speed must be automatically controlled by differential pressure, flow, temperature or another method.
- 5. The Incentive offer is not valid unless signed and dated by the Utility Representative. The Customer accepts the Utilities Incentive offer and agrees to the Terms and Conditions of the Utility by signing in the pre-approval offer block in step 5 of the above form.









# 2025 Variable Frequency Drive New Equipment & Retrofit



#### VFD Installation Information Form

Check with your utility representative to determine if the attached VFD Installation Information Form needs to be completed and submitted.

### **Pre-Installation:**

- 1. Review the Incentive eligibility requirements.
- 2. Review the proposed equipment specifications to confirm it meets the minimum efficiency requirements.
- 3. Provide to the utility representative the manufacturer's equipment specifications and confirm that it meets the minimum efficiency requirements:
  - a. Motor HP (size) horsepower
  - b. Fan or Pump ID identification (example: chilled water pump #1)
  - c. Area Served location (example: Atrium, Lobby, Cafeteria, 2nd floor offices)
  - d. Fan or Pump Application Code (Table 1 on the VFD worksheet)
  - e. Annual Hours of Operation

If controlled HP falls between two listed HP values, interpolate to determine the maximum Incentive. Show your calculations.

NE&C VFD INCENTIVE WORKSHEET								
Item	Motor HP	Fan or Pump ID	Area Served	Application Code <sup>1</sup>	Control Parameters <sup>2</sup>	Motor Efficiency	Annual Hours of Operation	Incentive⁴ (S)
Ex.	10	FWP-2	Atrium	FWP	DT	91%	5,400	\$1,000
	Motor name plate	Equipment identification or name	Location of pump or fan	Refer to table 1 on the Incentive Form	Refer to table 2 on the Incentive form	Refer to Motor Manufacture's specifications	State Annual Hours (> 2,000 hours / year)	Refer to table 4 on the Incentive form

#### **Post-Installation:**

#### Utility Representative must verify that:

- 1. The equipment including the VFD, motor and line reactors has been installed and is operable.
- 2. The VFD equipment matches the Incentive application information. If the equipment has changed from what was approved for the initial Incentive offer, the substituted equipment/material specifications must be submitted and reviewed by the utility to verify compliance with technical requirements and approved before an Incentive is considered.
- 3. Verify that the prior control is disabled
  - a. inlet or outlet dampers are fully open or removed
  - b. inlet or outlet valves are fully open or removed, bypass loop valved off or removed
- 4. Observe operation of drive, motor, and driven equipment
- 5. If possible, observe variation in drive speed with changing operating conditions
- 6. The invoice or proof of payment has been submitted
- 7. The Utility Representative & Customer have signed & dated the post installation inspection block on the Incentive form.









# 2025 Variable Frequency Drive New Equipment & Retrofit



### VFD Installation Information Form

### **Equipment Information**

Item ID: (Reference			(Reference number found in the Ince	Reference number found in the Incentive worksheet table)		
Fan or Pump ID(s):			(Example: FW-1, Feedwater Pump #1; CW-1, Condenser Water Pump #1) (Use list of applications from page one, or describe other)			
VFD Application:						
Building Type:  Office Warehouse		<ul> <li>Healthcare</li> <li>Manufacturing</li> </ul>	Elementary/High School		sity	
Type of area(s) served by fan(s	) or pump(s):					
Equipment served by the fan (s	) or pump (s):					
If fan, note type:			(centrifugal, forward curve, backward	d curve, axial, etc)		
Fan or Pump Nominal HP:			(if multiple motors, list individual HP	's)		
Nameplate motor efficiency(s)						
Fan or Pump Manufacturer:						
Model:						
Full Load Design Conditions: F			Pressure (inches static, feet of wate	er, PSI, other?)		
Existing Controls:			(discharge damper, inlet guide vanes	s, outlet control valve, b	ypass valve, etc.)	
Existing setpoint:			(inches static, feet of water, PSI, oth	ier?)		
Operating Hours						

#### The fan or pump operates the following hours: (*Example: 0600 to 1800*)

Summer:		Winter:		
Weekdays	to	Weekdays	to	
Saturdays	to	Saturdays	to	
Sundays	to	Sundays	to	
Number of shifts per weekday:		Number of shifts per week	end day:	

#### **Motor Load**

Option 1: (retrofit): Measured input power under full load:	kW, (true RMS power)	Pow	er Factor
Option 2: (retrofit): Measured current and voltage under full load:	Amps	Volts	
Load calculation = volts X	amps X	PF =	kW
Option 3: (retrofit or new): Estimated Fan or Pump Load:	%, Estimated Power	kW	
If estimating load, provide description, assumptions and formula u	sed to calculate power:		
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### **Proposed Operations**

The proposed VFD will be automatically controlled to maintain the following setpoints:					
Flow (CFM, GPM, other?):	Pressure (inches static, feet of water, PSI, other?)				
Other? (describe):					

	ESTIMATED VFD SPEED IN FUTURE OPERATIONS					
	SUMN	1ER	WINTER			
% LOAD	Week-day	Week-end	Week-day	Week-end		
90% to 100%						
80% to 90%						
60% to 80%						
20% to 60%						
Off						
TOTALS	100%	100%	100%	100%		