



#### **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 Ele	ctric Co-op 🔲 Unitil	Date:		
Electric Account #:	Natural Gas Account #:			
Company Name:	Contact Person:			
Phone Number:	Contact Email:			
Installation Address:	City:			
Mailing Address:	City:	State:	Zip:	
STEP 2 CONTRACTOR INFORMATION (if self-installed lear	ve blank)			
Contractor Company (if applicable):	Contact Person:			
Mailing Address:	City:	State:	Zip:	
Contact Phone:	Contact Email:			
STEP 3 PAYEE INFORMATION				
Check Payable to: ☐ Customer ☐ Contractor ☐ Other	Payment To:			
Mailing Address:	City:	State:	Zip:	
LIBERTY CUSTOMERS ONLY - Signature (for payment to Contrac	etor/Other):			
STEP 4 RETURN APPLICATION TO UTILITY REPRESENT	ATIVE			
Send to your utility representative or email to your utility here:				
Eversource: efficiencynh@eversource.com	Liberty: nhsaves@libertyutilities.com			
New Hampshire Electric Co-op: solutions@nhec.com	Unitil: efficiency@uni	itil.com		
STEP 5 PRE APPROVAL OFFER				
<b>STOP</b> Once you have received Utility Pre-approval notification, s and Program Terms and Conditions.	ign below accepting ince	ntive offer, payment	arrangement,	
Utility Signature:	Date:			
Amount Of Incentive:				
CUSTOMER SIGNATURE:				
STEP 6 PROJECT COMPLETION				
<b>STOP</b> Sign below to indicate that project is completed. Send final Incentive calculated based on 'as-installed' conditions.	al signed application to U	tility.		
Utility Signature:	Date:			
CUSTOMER SIGNATURE:				
Final Project Cost:	Final Incentive Amou	ınt:		





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								
Vendor quote or proposal required for Incentive.								

	<sup>1</sup> FAN OR PUMP APPLICATION CODE
CODE	APPLICATION
SFA	Supply fan on supply air handler
SFP	Supply fan on VAV packaged HVAC unit
RFA	Return fan on return air handler
RFP	Return fan on VAV packaged HVAC unit
BEF	Building exhaust fan
PEF	Process exhaust fan
HEF	Fume hood exhaust fan & makeup air fan
HWP	Heating hot water pump
WWP	Circulation pump for water source heat pump loop
FWP	Boiler feed water pump
CWP	Condensate water pump
CHWP	Chilled water pump
BDF	Boiler draft fan
HYP	Hydraulic pump
WTP	Water supply or wastewater treatment pump
RAS	RAS pump in wastewater treatment plant
CTF	Cooling Tower Fan
PCP	Process Cooling Pump

4INCENTIVES					
HP CONTROLLED BY EACH VFD	MAXIMUM INCENTIVES (\$)				
1 – 3	\$800				
5 – 7.5	\$900				
10	\$1,000				
15	\$1,125				
20	\$1,575				

<sup>2</sup> CONTROLLING PARAMETERS				
DP	Pressure Differential			
DT	Temperature Differential			
OTH	Specify			

FACILITY TYPE (CHECK ONE)					
☐ College/University ☐ Warehouse ☐ School K-12 ☐ Restaurant	☐ Multi-Family☐ Retail☐ Hotel/Motel☐ Grocery	☐ Health Care☐ Offices☐			

<sup>1</sup>Forward curve fans with inlet guide vanes are not eligible for a VFD Incentive. Other VFD applications may be eligible for a Custom Incentive.

Powered by:









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

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

<sup>&</sup>lt;sup>4</sup>VFD's on VAV boxes over 10HP are not eligible for Incentives. Motors and drives greater than 20 HP or for industrial purposes should use the custom application pathway.

## 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: AC-2, air handler #2, 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. Verify the fan is not a forward curve with inlet vanes type.
  - f. 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	Incentive <sup>4</sup> (S)
Ex.	10	AC-2	Atrium	SFA	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 number found in the Incentive worksheet table)
Fan or Pump ID(s):	(Example: FW-1, Feedwater Pump #1; CW-1, Condenser Water Pump #1)
VFD Application:	(Use list of applications from page one, or describe other)
Building Type: ☐ Office ☐ Hotel/Motel ☐ Healthcare ☐ Warehouse ☐ Restaurant ☐ Manufacturing	☐ Elementary/High School ☐ College/University ☐ Other?
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 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: Flow (CFM, GPM)	Pressure (inches static, feet of water, PSI, other?)
Existing Controls:	(discharge damper, inlet guide vanes, outlet control valve, bypass valve, etc.)
Existing setpoint:	(inches static, feet of water, PSI, other?)
The fan or pump operates the following hours: (Example: 0600 to 1800)  Summer:  Weekdays to Saturdays to Sundays to	Winter:         Weekdays       to         Saturdays       to         Sundays       to
Number of shifts per weekday:	Number of shifts per weekend day:
Motor Load	
Option 1: (retrofit): Measured input power under full load:	
Option 2: (retrofit): Measured current and voltage under full load: volts X	Volts
Load calculation = volts X	amps X PF =kW
Option 3: (retrofit or new): Estimated Fan or Pump Load:	
If estimating load, provide description, assumptions and formula use	ed to calculate power:
Proposed Operations	
The proposed VFD will be automatically controlled to maintain the fo	ollowing setpoints:
Flow (CFM, GPM, other?):	•
Other? (describe):	
, ,	

ESTIMATED VFD SPEED IN FUTURE OPERATIONS					
% LOAD	SUMMER		WINTER		
	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%	