



HB HEATING MODULE

CLIENT & PROJECT REFERENCES



FLYASH HOPPER HEATING SYSTEMS



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INTRODUCTION

The development and use of the type HB Heating module was *exclusively* pioneered by the Heat Tracing Division of Cooperheat, Inc. in Piscataway, NJ. Early Cooperheat designs and installations date back to 1976.

Many of these installations are now over 20 years old and still operating with no heater failures.

The following lists show some of the successful Power and Industrial projects that we have completed over the last 26 years. Projects are shown by client name, plant name, # of hoppers and installation size

HTD Heat Trace, Inc. purchased the Heat Tracing Division of Cooperheat in 1996. Since this time, HTD has continued to engineer and sell

HB Heating Module Systems based upon the proven application technology and product reliability that we established as Cooperheat.

These partial lists show over 100 projects, involving some 2,837 individual HB systems, 27.9 MW of installed load and several BILLION hours of successful performance and maintenance-free operation.

UTILITY	PLANT	# HOPPERS HEATED	TOTAL INSTALLED KW
Alabama Power	Barry Station Unit # 4	16	194
Arizona Public Service	Four Corners	2	12
Associated Electric Co-op	New Madrid	48	490
Atlantic City Electric	B.L. England Station	8	104
Basin Electric	Antelope Valley Unit # 1	28	1,120
Big Rivers Electric Cooperative Inc	Reid Station Unit # 2	16	190
	Reid Station Unit # 3	16	195
Cajun Electric Power Cooperative Inc	Cajun	60	804
Central Illinois Public Service Co	Newton Station Unit # 2	16	320
Colorado Ute Electric Association, Inc	Craig Station	40	478
Commonwealth Edison	Kincaid Station	64	480
	Will County	16	155
Consumers Energy Co	J.H.Campbell Unit # 2	48	192
	J.H.Campbell Unit # 3	112	560
Cooperative Power Assoc.	Coal Creek	10	80
The Dayton Power & Light Co.	J.M.Stuart Station Unit # 2	8	46
	J.M.Stuart Station Unit # 4	46	206
Delmarva Power & Light Co	Indian River Station	8	96
Detroit Edison Co	Belle River Unit # 1	72	691
	Belle River Unit # 2	72	691
	St. Clair Unit # 6	48	370
Duke Power Company	Allen Unit # 1	12	44
	Allen Unit # 2	12	44
	Allen Unit # 3	16	58
	Allen Unit # 4	16	58
	Allen Unit # 5	16	58

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END USER	PLANT / PROJECT	# HOPPERS HEATED	TOTAL INSTALLED KW
Duke Power Company	Belews Creek	2	17
	Marshall Station Unit # 1	16	125
	Marshall Station Unit # 2	16	109
	Marshall Station Unit # 3	16	40
	Marshall Station Unit # 4	16	46
Empire District Electric Co	Asbury Station Unit # 1	8	54
Houston Light & Power Co	W.A.Parish Station	40	600
Minnesota Power & Light Co	Clay Boswell Steam Station	4	40
Muscatine Power & Water	Muscatine	8	102
Nevada Power Co	Reid Gardner Station Unit # 4	16	75
New England Power Co	Brayton Point Units # 1 & 2	32	221
	Brayton Point Unit # 3	24	199
Northern Indiana Public Service Co	Baily Station	36	504
	R.M.Schafer	64	755
Northern States Power Co	Riverside	12	185
Ohio Edison	W.H.Sammis Unit # 1,2,3 & 4	48	1024
	W.H.Sammis Unit # 5,6 & 7	150	1680
Otter Tail Power	Coyote Station	44	370
Pennsylvania Power & Light	Brunner Island	38	483
Public Service Electric & Gas	Mercer Station	8	20
Public Service-New Hampshire	Newington Station	32	144
Public Service of Oklahoma	Northeastern Station	84	780
Sask Power	Poplar River Station	22	319
Savannah Electric	Effingham Station	14	150
Seminole Electric	Seminole Units 1 & 2	64	512
Southern Indiana Gas & Electric	A.B. Brown Station Unit # 2	16	166
	Warrick Unit # 1	24	250
Southwestern Public Service	Harrington Station Unit #2 &3	56	619
Texas Municipal	Gibbons Creek	40	440
Toledo Edison Co	Bayshore Station	32	288
Union Electric Co	Meramec Units # 1, 2, 3a,3b, 4a and 4b	96	700
Virginia Electric Power Co	Possum Point	8	34
	Yorktown	24	370

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Illinois Power	Hennepin Station Units 1 & 2	12	108
SaskPower	Boundary Dam	6	64
Alcan Industries	Alcan Ingot & Recycling Plant	5	27
Savannah Energy Systems	President Street Extension	2	1
American Refuel	Semass Units 1 & 2	6	75
Georgia Power	Plant Hammond Unit # 2	9	98
Fibrowatt Thetford Ltd	Thetford Power Station	8	45
Glens Falls Cement	Glens Falls Plant	12	50
Callidus Tech		3	10
Degussa	Catalyst Recovery of LA	1	20
American Refuel	Semass Units 1 & 2 Stilt Heater Project	16	10
Savannah Energy Systems	President Street Extension	10	5
Saline Water Conversion Corp	Yambu Refinery	6	48
PECO Energy	Cromby Station	2	25
Queensland Power Australia	Millmerran Power Project	28	300
Consumers Energy	J H Campbell Plant Unit # 1	32	240
National Thermal Power Corporation Ltd-India	Simhadri	256	2,895
Sask Power	Boundary Dam Unit # 2 Boundary Dam Unit # 5	12 6	128 64
Corning	Concord III	5	70
National Thermal Power Corporation Ltd - India	Talcher	16	165
Olmstead County	Waste to Energy Facility	6	19
Constellation Power Services	Herbert A Wagner Plant Unit # 2	20	188
City of Ames	Unit # 7	6	52
Tri State G & T Association	Craig Station Unit # 2	32	339
Duke Energy Corp	Allen Station Units # 3 & 4	32	678
United Power Association	Stanton Station	10	124
U S Steel Corp	Bethlehem Steel	4	48

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END USER	PLANT / PROJECT	# HOPPERS HEATED	TOTAL INSTALLED kW
US Army	Aberdeen Proving Grounds	8	85
Carolina Power & Light	Asheville Steam Electric Plant Unit # 2	12	128
Saline Water Conversion Corp	Yambu Refinery	8	64
Muscatine Power & Water	Muscatine	6	60
Duke / Fluor Daniel	Batu Hijau	24	175
U S Steel Corp	Gary Works	18	138
Duke Energy Corp	Allen Station Unit # 5	16	139
Saline Water Conversion Corp	Yambu Refinery	12	96
SaskPower	Boundary Dam Unit # 4	6	64
Ogden Martin	Hillsborough County	21	153
Fujian Pacific Electric Co Ltd	Meizhou Wan Power Plant Units 1 & 2	80	672
Hebei Hanfeng Power Generation Co Ltd	Hanfeng Power Plant Units 1 & 2	64	755
Dynergy Midwest	Wood River Station Unit # 4	16	96
University of Eau Claire	Unit # 1	4	18
Wynnewood Refining Corp	Wynnewood Refinery	3	27
Chevron	Pasagoula Refinery Kapolele Refinery	6 4	57 35
Mirant Mid Atlantic, LLC	Dickerson Station	10	111
Lansing Water & Light	Erickson Station Unit # 1	20	142

As a testimonial and endorsement of its proven reputation and reliability, the HB Heating Module System has been specified and used on many of the largest power plants constructed around the world. The precipitators and baghouses used in these plants are considered critical components and essential equipment for unit availability and continual generation of power. These clients and plants selected the HB Heating Module System because it has repeatedly proven to be a design, product and system that will perform with complete safety and total reliability.

Many of the HB Heating Module System installations shown on the previous lists operate in the critical operational environment of very large, coal fired power plants.

Examples of these plants are identified in red. These particular HB installations are operating in plants with steam turbine generating capacities in excess of 1,000 MW.

HB Heating Modules are FM and CSA approved to all current IEEE, NEC and Canadian standards.

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CONSULTING / ARCHITECT ENGINEERS

Most new power and large industrial boiler projects involve the services of Consulting Engineers that specialize in the design and construction of such plants. In the twenty five plus years that HTD has specialized in flyash hopper heating systems, we have provided design, engineering and specification support for the HB Heating Module System to the following engineering companies:

- Bechtel Power Corporation
- Black and Veatch
- Brown and Root, Inc
- Burns and McDonnell Engineering Company
- Burns and Roe
- Duke/Fluor Daniel
- Ebasco Services, Inc
- Fluor Engineers, Inc
- Ford, Bacon and Davis, Inc
- Gibbs and Hill, Inc
- Gilbert/Commonwealth, Inc
- Sargent and Lundy
- Stanley Consultants, Inc
- Southern Company Services
- Stone and Webster Engineering Corporation
- Tippet and Gee
- United Engineers and Constructors International, Inc

AIR POLLUTION CONTROL EQUIPMENT MANUFACTURERS

Since 1976, type HB Heating Module Systems have been successfully used by most of the major air pollution control equipment manufacturers on many major precipitator and baghouse projects. Following is a partial list of our clients from this market segment:

- Alstom Power, Inc
- Alstom Power (Canada) Inc
- Amerex Industries, Inc
- American Air Filter
- Babcock & Wilcox
- Belco Pollution Control Corp
- Bharat Heavy Electricals Ltd - India
- CEA Carter Day
- CE Power
- Donaldson Company, Inc
- Dustex Corporation
- Environmental Elements Corporation
- FLS miljo, Inc
- Hamon Research Cottrell, Inc
- Joy Manufacturing
- Marsulex Environmental Technologies
- Mikropul, Inc
- Wheelabrator Air Pollution Control, Inc



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