

Medium and Large Power Transformer Users List Retrofill & New Installations

Qty	Base MVA	HV (kV)	LV (kV)	End User	Manufacturer	Type	Cooling Class	Notes
2	100	245	72.5	Petrobras	Trafo Brazil	Substation	KNAN/KNAF	Built November 2009
1	22.14 MVAR	242	242	Electro Norte Brazil	Areva Brazil	3 Ph Reactor	KNAN	Built December 2006 Energized October 2008
1	212	230	18	Platte River Power Authority Ft. Collins, CO	Waukesha Electric Systems	GSU	KNAN/KNAF/ KNAF	Built and commissioned 2008
2	100	230	115	Platte River Power Authority Ft. Collins, CO	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned 2010
2	100	230	115	Platte River Power Authority Ft. Collins, CO	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned 2008
2	100	230	115	Platte River Power Authority Ft. Collins, CO	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned April 2007
1	50	230	34.5	State University of New York - Buffalo	Waukesha Electric Systems	Substation	KNAN	Built and Commissioned June 2008
1	33	230	115	CFE Mexico	IEM	Autotransformer	KNAN/KNAF/ KNAF	Retrofilled in 2010
4	8	230	12.5	Missoula Electric Coop Ovando, MT	GE	1 Ph Transmission	KNAN/KNAF/ KFAF	Retrofilled Mar. 2005, commissioned Dec. 2005 Orig. commissioned 1980
1	240	161	19	Alliant Energy, Burlington, IA	Waukesha Electric Systems	GSU	KNAN/KNAF/ KNAF	Built and commissioned 2010

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1	200	161	19	Alliant Energy, Burlington, IA	Moloney	GSU	KNAF	Retrofilled March 2004 Orig. commissioned 1966
4	115	161	13.8	Century Aluminum	Siemens	Substation	KFAF	Rebuilt and commissioned 2009
2	115	161	13.8	Century Aluminum	Siemens	Substation	KFAF	Rebuilt and commissioned 2008
1	56	161	69	Paragould Water Light & Cable	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned October 2009
2	25	161	13.8	Riley Power (Alliant Energy)	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned September 2009
1	25	161	12.5	Valero Refinery Memphis, TN	Waukesha Electric Systems	Substation	KNAN/KNAF/ KFAF	Built & commissioned April 2006
2	25	161	12.5	Valero Refinery Memphis, TN	Waukesha Electric Systems	Substation	KNAN/KNAF/ KFAF	Built & commissioned Feb 2006
1	25	161	12.5	Premcor Refinery Memphis, TN	GE	Substation	KNAN/KNAF/ KNAF	Retrofilled July 2005 Orig. commissioned 1980
1	11.04 MVAR	145	145	Electro Norte Brazil	Trafo Brazil	3 PH Reactor	KNAN	Built July 2006 Energized March 2008
2	40	145	15	Electronorte Brazil	Trafo Brazil	Substation	KNAN/KNAF	Built June 2007 Energized August 2008
1	40	145	15	Waukesha Electric Systems	Waukesha Electric Systems	Substation	KNAN/KNAN	Built and commissioned August 2008
1	33.3	145	15	Ampla Brazil	Trafo Brazil	Substation	KNAN/KNAF/ KNAF	Rebuilt April 2007. Energized July 2007

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1	30	145	24	Celesc Brazil	WEG	Mobile Substation	KNAN	Built October 2009
1	30	145	24	Celesc Brazil	Trafo Brazil	Mobile Substation	KNAN	Built October 2006 Energized January 2007
1	25	145	24.5	Celesc Brazil	Trafo Brazil	Mobile Substation	KNAN	Built October 2006 Energized January 2007
1	20	145	15	Electronorte Brazil	Trafo Brazil	Substation	KNAN/KNAF	Built November 2006 Energized December 2009
1	20	145	12	Ampla Brazil	Trafo Brazil	Substation	KNAN/KNAF/ KNAF	Rebuilt April 2007. Energized July 2007
1	40	138	15	Electronorte Brazil	Comtrafo	Substation	KNAN/KNAF	Built 2011
2	64	138	12	Alliant Energy Beloit, WI	GE	GSU	KNAN/KNAF	Retrofilled Dec. 2006 Orig. commissioned 1955
2	50	138	13.8	Thermal Energy Coop Houston, TX	Delta Star	Substation	KNAN/KNAF/ KNAF	Built and commissioned January 2010
2	40	138	13.8	Celesc Brazil	Siemens Brazil	Substation	KNAN/KNAF/ KNAF	Build July 2009
1	36	138	13.8	Tropicana Beverages Bradenton, FL	Westinghouse	GSU	KNAN/KNAF/ KNAF	Retrofilled Aug 2005 Orig. commissioned 1990
2	30	138	24	Celesc Brazil	Trafo Brazil	Mobile Substation	KNAN	Built October 2006
1	28	138	5	Dynergy-Midwest Generation	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned July 2009

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1	28	138	13.8	Duncan Public Utility Authority	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned September 2009
2	26	138	12	ATI Titanium	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned April 2008
1	24	138	24 x 69	ATC DePere, WI	Westinghouse	Substation	KNAN/KNAF/ KNAF	Retrofilled June 2004 Orig. commissioned 1965
1	20	138	69	Electro Norte Brazil	WEG	Autotransformer	KNAN/KNAF	Built November 2006. Energized August 2008
1	20	138	13.8	Electro Norte Brazil	Trafo Brazil	Substation	KNAN/KNAF	Built November 2006
1	12.5	138	13.8	Electro Norte Brazil	Trafo Brazil	Substation	KNAN/KNAF	Built July 2006 Energized March 2008
1	12	138	12.5	United REMC Roanoke, IN	Waukesha Electric Systems	Dist	KNAN/KNAF/ KNAF	Built, commissioned & Retrofilled Dec. 2005
2	25	134	13.2	Wood County EC Quitman, TX	Waukesha Electric Systems	Substation	KNAN/KNAF	Built & commissioned Feb 2007
1	90	132	33	EDF Energy Networks	Areva	Substation	KNAN	Energized November 2008
2	50	132	11	Energy Australia	Wilson	Substation	KNAN	Built in 2008
2	40	220	21	Iberdrola	Incoesca	Substation	KNAN/KNAF/ KNAF	Built and commissioned 2008
1	120	115	17.5	Alliant Energy Cedar Rapids, IA	North American	GSU	KNAN/KNAF/ KNAF	Retrofilled May 2004 Orig. commissioned 1994

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2	60	115	15	USBR - Nimbus Gen. Station, Folsom, CA	Delta Star	GSU	KNAN/KNAF/ KNAF	Built 2007 and commissioned 2008
1	55	115	13.2	Alliant Energy Cedar Rapids, IA	Allis Chalmers	GSU	KNAN/KNAF/ KNAF	Retrofilled April 2006, Orig. commissioned 1955
1	50	115	69	Az Electric Power Coop	US Transformer	Substation	KNAN/KNAF/ KNAF	Retrofilled in Jan 2010
1	30	115	13.8	Los Alamos National Lab	GE	Substation	KNAN/KNAF/ KNAF	Retrofilled in 2010
1	30	115	12.5	PG&E, San Francisco, CA	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built and commissioned 2008
1	30	115	6.9	Phelps Dodge Miami, AZ	GE	Substation	KNAN/KNAF	Rebuild June 2004 by Siemens-USA With LTC
1	30	115	12.5	Lawrence Berkeley National Labs	Delta Star	Substation	KNAN/KNAF/ KNAF	Built and Commissioned Feb 2010
1	30	115	4.16	FMI - Bagdad AZ	Moloney	Substation	KNAN/KNAF/ KNAF	Retrofilled in April 2010
1	30	115	6.9	Phelps-Dodge Miami, AZ	Siemens	Substation	KNAN, KNAF/ KFAF	Retrofilled May 2005
2	27	115	13.2	City of Manassas Manassas, VA	Waukesha Electric Systems	Substation	KNAN, KNAF, KNAF	Built & commissioned June 2007
2	25	115	12.5	Lower Valley Energy Afton, WY	Kuhlman	Substation	KNAN/KNAF	Retrofilled June 2007 Orig commissioned 1982
1	22	115	34.5	Maquoketa, IA	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Retrofill Sept. 2007. Built 1990's

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2	20	115	12.5	Platte River Power Authority Ft. Collins, CO	Waukesha Electric Systems	Substation	KNAN/KNAN	Built and commissioned August 2008
1	20	115	12.5	Lower Valley Energy Afton, WY	Delta Star	Substation	KNAN/KNAF	Retrofilled in 2010
1	20	115	4.16	FMI - Bagdad AZ	RTE/ASEA	Substation	KNAN/KNAF/ KNAF	Retrofilled in April 2010
1	20	115	4.16	FMI - Miami AZ		Substation	KNAN/KNAF/ KNAF	Retrofilled Jan 2010
1	20	115	2.4	FMI - Miami AZ		Substation	KNAN/KNAF/ KNAF	Retrofilled Jan 2010
1	15	115	12.5	Lane Electric Coop Eugene, OR	N/A	Substation	KNAN	Retrofilled Aug 2007
2	15	115	12.5	City of Opelika Alabama	Kuhlman	Substation	KNAN/KNAF	Built Oct 2004
2	12	115	38	FP&L	Prolec	Substation	KNAN/KNAF/ KNAF	Built and commissioned in 2010
2	12	115	12.5	Lower Valley Energy Afton, WY	GE	Substation	KNAN/KNAF	Retrofilled June 2006 Orig. commissioned 1976
2	12	115	5	Lectrics	Waukesha Electric Systems	Substation	KNAN/KNAN	Built September 2008
1	40	110	20	EnBW - Stuttgart	Siemens Dresden	Substation	KNAN	Built April 2008
1	40	110	20	Energieteam Germany	Areva Moenchengladbach	Substation	KNAN	Built and Commissioned 2007
1	22.4	110	13.2	Entergy	Westinghouse	Substation	KNAN	Retrofilled Oct 2007
4	70	72.5	15	Petrobras	Trafo Brazil	Substation	KNAN/KNAF/ KNAF	Built November 2009

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8	60	72.5	15	Petrobras	Trafo Brazil	Substation	KNAN/KNAF	Built November 2009
1	8 MVA	72.5	72.5	Electro Norte Brazil	Trafo Brazil	Grounding Transformer	KNAN	Built August 2006. Energized April 2007
1	36	70.6	12.5	Opti-Solar	Delta Star	Substation	KNAN/KNAF/ KNAF	Built in 2008, commissioned 2009
1	110	69	13.8	US Steel	IEM	GSU	KANA/KNAF/ KNAF	Built and commissioned 2008
1	66	69	13.8	US Steel	Kuhlman	Substation	KNAN/KNAF/ KNAF	Built and commissioned in 2009
1	66	69	13.8	US Steel	Kuhlman	GSU	KNAN/KNAF/ KNAF	Built and Commissioned 2009
1	50	69	12.5	Alliant Energy Dubuque, IA	Westinghouse	GSU	KNAF	Retrofilled October 2001 Orig. commissioned 1957 With LTC
1	50	69	13.8	Braskem Brazil	Siemens Brazil	Substation	KNAN	Energized February 2006
1	40	69	8.32	Easton Utilities Easton, MD	Westinghouse	Substation	KNAN/KNAF/ KNAF	Retrofill October 2007. Built 1991.
2	30	69	13.8	Archer Daniels Midland Clinton, IA	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built May 2006 & December 2006
1	30	69	13.8	Wyandotte Municipal	Westinghouse	Substation	KNAN/KNAF	Retrofilled November 2009
2	30	69	13.8	Archer Daniels Midland Clinton, IA	Waukesha Electric Systems	Substation	KNAN/KNAF/ KNAF	Built October 2008
1	28	69	8.32	Easton Utilities Easton, MD	Delta Star	Substation	KNAN/KNAF/ KNAF	Retrofilled Oct. 2007. Built 1972
1	28	69	25	Easton Utilities Easton, MD	Delta Star	Dist	KNAN/KNAF	Retrofilled March 2007. Orig commissioned 1990

Qty	Base MVA	HV (kV)	LV (kV)	End User	Manufacturer	Type	Cooling Class	Notes
1	26.6	69	13.8	Electro Norte Brazil	Siemens	Substation	KNAN/KNAF/ KNAF	Built 2011
1	26.6	69	13.8	Electro Norte Brazil	Comtrafo	Substation	KNAN/KNAF	Built 2011
1	26	69	13.8	Electro Norte Brazil	Trafo Brazil	Substation	KNAN/KNAF/ KNAF	Built 2007
2	26.6	69	13.8	Electro Norte Brazil	Trafo Brazil	Substation	KNAN/KNAF/ KNAF	Built November 2006 Energized January 2009
1	26.6	69	13.8	Electro Norte Brazil	Trafo Brazil	Substation	KNAN/KNAF/ KNAF	Built November 2006
1	26.6	69	13.8	Electro Norte Brazil	Trafo Brazil	Substation	KNAN/KNAF	Built November 2007
1	20	69	13.8	Electro Norte Brazil	Trafo Brazil	Substation	KNAN/KNAF/ KNAF	Built 2007
1	20	69	13.2	Maui Electric	Waukesha Electric Systems	GSU	KNAN/KNAF/ KNAF	Built and commissioned November 2009
7	20	69	4.16	Archer Daniels Midland Cedar Rapids, IA	Pennsylvania Transformer	Substation	KNAN/KNAF	Built and commissioned 2008
2	20	69	13.2	Maui Electric Maalaea, HI	Waukesha Electric Systems	GSU	KNAN/KNAF/ KFAF	Built and commissioned March 2006
1	20	69	13.2	Maui Electric Maalaea, HI	ABB	GSU	KNAN/KNAF/ KFAF	Retrofilled October 2003 Orig. commissioned 1990
2	18	69	20	So. California Edison California	Kuhlman	Substation	KNAN/KNAF/ KFAF	Built October 2003 & March 2004
1	15	69	12.5	Waverly L&P Waverly, IA	Westinghouse	Substation	KNAN/KNAF/ KFAF	PCB Retrofill September 2007
1	15	69	5	Victoria Canal Pump	Virginia Transf.	Substation	KANA/KNAF/ KNAF	Built and commissioned May 2010

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2	14	69	4	Maui Electric Maalea, HI	GE	GSU	KNAN/KNAF/ KNAF	Retrofilled Oct. 2003 & May 2004 Orig. commissioned 1973
1	12.5	69	13.8	Electro Norte Brazil	Trafo Brazil	Substation	KNAN/KNAF	Built July 2006 Energized August 2008
1	12	69	4.16	American Electric Power Roanoke, VA	Virginia Transf.	GSU	KNAN/KNAF/ KNAF	Built & commissioned August 2005
1	10	69	4.16	People's Coop Rochester, MN	Uptegraff	Substation	KNAN/KNAF	Built March 2004
2	10	69	12	Dept. of Water & Power Los Angeles, CA	Delta Star	Mobile	KNAN/KNAF/ KNAF	Built & commissioned 2005
2	7.58	69	12.5	Lower Valley Energy Afton, WY	GE	Substation	KNAN/KNAF	Retrofilled June 2005 Orig. commissioned 1965
2	7.5	69	12.5	Lower Valley Energy Afton, WY	GE	Substation	KNAN/KNAF	Retrofilled August 2005 Orig. commissioned 1965
1	37.5	67	12.5	Reedy Creek Energy Lake Buena Vista, FL	Waukesha Electric Systems	Substation	KNAN/KNAF	Retrofilled Dec. 2005 Orig. commissioned 1988
2	20	67	11	Country Energy Australia	Wilson	Substation	KNAF	Built and Commissioned 2003
1	16.8	67	12.5	Waverly L&P Waverly, IA	Delta Star	Substation	KNAN/KNAF/ KFAF	Retrofilled Oct. 2006 Orig. commissioned 1999
2	10	67	11	ETSA Utilities	Wilson	Skid mounted Mobile		Built and commissioned in October 2008
1	10	60	25	Kinross Gold	Virginia Transf.	Substation	KNAN/KNAF/ KNAF	Built and commissioned in 2009
2	20	46	13.8	Phelps Dodge Morenci, AZ	Ferranti-Packard	Substation	KNAN/KNAF/ KNAF	Retrofilled Sept. 2004 Orig. commissioned 1981

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1	20	46	13.8	Phelps-Dodge Miami, AZ	Ferranti-Packard	Substation	KNAN, KNAF/ KFAF	Retrofilled May 2005 Orig. commissioned 1995
2	15	44	13.8	Kennecott Copper Salt Lake City, UT	Kuhlman	Substation	KNAN/KNAF	Retrofilled Aug. 2005 Orig. commissioned 1989
1	27	37	0.65	Noranda Aluminum New Madrid, MO	Toshiba	Rectif.	KNAN/KNAF	Retrofilled May 2004
2	27	37	0.6	Noranda Aluminum New Madrid, MO	Toshiba	Rectif	KNAN/KNAF	Retrofilled April 2005
1	26	37	0.6	Noranda Aluminum New Madrid, MO	Fuji	Rectif	KNAN/KNAF	Retrofilled April 2005
1	18	35	4.16	GE Energy	Virginia Transf.	Substation	KNAN/KNAF/ KNAF	Commissioned 2008
2	60	34.5	13.8	Thyssen Krupp Mt. Vernon, AL	WEG	Substation	KNAN/KNAF/ KNAF	Built and commissioned 2009
2	30	34.5	0.6	Noranda Aluminum New Madrid, MO	Fuji	Rectif	KNAN/KNAF	Retrofilled April 2005
1	30	34.5	0.56	Noranda Aluminum New Madrid, MO	Fuji	Rectif.	KNAN/KNAF	Retrofilled May 2004
2	30	13.8	5	Thyssen Krupp Mt. Vernon, AL	WEG	Substation	KNAN/KNAF/ KNAF	Built and commissioned 2009
6	18	34.5	13.8	Thyssen Krupp Mt. Vernon, AL	WEG	Substation	KNAN/KNAF/ KNAF	Built and commissioned in 2009
1	22	34	12	Maquoketa, IA	Kuhlman	Substation	KNAN/KNAF	Built and commissioned September 2007
2	20	34	17.2	City of Pasadena, CA	Shilin	Substation	KNAN/KNAF/ KNAF	Built and Commissioned 2009
2	24	27.6	600	Ford Windsor, Canada	GE	Substation	KNAN/KNAF/ KNAF	Retrofilled June 2007, Orig commissioned 1970 Rewound 1995

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1	39	24	5	Alliant Ottumwa, IA	GE	Aux Transformer	KNAN/KNAF	Retrofilled June 2007
1	37.5	24	13.8	PCS Phosphates	Delta Star	GSU	KNAN/KNAF/ KNAF	Built and commissioned 2009
2	20	23	13.8	Northrop Grumman Newport News, VA	Delta Star	Substation	KNAN/KNAF	Built Feb 2006, commissioned April 2007
2	11	20	4.4	Alliant Energy Burlington, IA	Allis Chalmers	Aux. Power	KNAN/KNAF	Retrofilled March & May 2004 Orig. commissioned 1966
1	25	19	13.2	Keyspan Energy Queens, NY	Delta Star	Aux. Power	KNAF	Retrofill April 2004, Orig. commissioned 2000
4	15	19	4.36	Georgia Power/Ctrs for Disease Control Atlanta, GA	Waukesha Electric Systems	GSU	KNAN/KNAF	Built and commissioned August 2007
1	10	18	2.4	Alliant Energy Cedar Rapids, IA	GE	Aux. Power	KNAF	Retrofill May 2004, Orig. commissioned 1965
2	110	13.8	14	Century Aluminum	Siemens	Voltage Reg	KNAN	Rebuilt and commissioned 2008
1	11.5	13.8	4.16	Tropicana Beverages Bradenton, FL	Ward	Substation	KNAN/KNAF	Retrofilled Aug 2005 Orig. commissioned 1990
1		13.8		Alliant Energy Cedar Rapids, IA	Waukesha Electric Systems	Grounding Transformer	KNAN	Commissioned August 2006

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Cargill Industrial Oils & Lubricants
9320 Excelsior Blvd
Hopkins, MN 55343-3444
www.cargill.com
P: 800-842-3631

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