


# Electrical Consumers List

## CO<sub>2</sub> Capture Facility

### Kårstø, Norway

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2	<del>4 Dec 08</del>	Revised as Noted	SMS	CK	WJ	WE		
1	19 NOV 08	Revised per 10112936-S-FIPB-E-0060 and as noted	VSA	SMS	BTR	AJG		
0	10 NOV 08	Issued for Information	VSA	SMS	BTR	WRE		
Rev.	Date	Reason for Revision	By	Check	App	App	Client	
 Bechtel Power Corporation			Job No. 25474					
			Document No.					Rev.
			25474 - 000 - E8 - 0000 - 00001					2
			PAGE 1 of 4					
<b>GASSNOVA</b>			Project No. - Originator - Disc Code - Doc Type - Serial No. 10112936 - PB - E - PAL - 0001					



Rev	Item No.	Tag No.	Item Description	Capacity Per Component	Type	Type of Operation	Voltage (Input Rating)	Phase	Rated Power (Note 1) kW	Required Power (Note 1) kW	Nominal Sizing Current (Note 1)	Starting Current (% of Nominal) (Note 1)	Efficiency (Note 1)	Power Factor (Note 1)	Diversity Factor of Load	Starting Method	Speed (Note 2)	Connected to Switchgear (Note 4)	Degree of Protection (Note 2)	Weight (Note 2)	Maker (Note 2)	Type (Note 2)	Supplier (Note 2)	Normal Operation Required Power (Note 1) kW	Critical Load (Battery or UPS) Required Power (Note 1) kW	Emergency Load (Diesel) Required Power (Note 1) kW	Max Load (Test Block) Required Power (Note 1) kW	Maintenance Loads (Dead Time X firm) kW	Remarks
1	1	1BAMA101	Flue gas blower (Absorber 1)	1x100% per Train (50% per Unit)	Induction Motor	Continuous	22kv	3	6340	5072	183	500	96	0.88	1.0	ASD		1ESES101						5072	0	0	6340	0	Rev 1 - Changed Voltage Rating from 11kV to 22kV
1	2	1BAMA102	Flue gas blower (Absorber 2)	1x100% per Train (50% per Unit)	Induction Motor	Continuous	22kv	3	6340	5072	183	500	96	0.88	1.0	ASD		1ESES101						5072	0	0	6340	0	Rev 1 - Changed Voltage Rating from 11kV to 22kV
	3	1BAMA103	Seal Air Fans A	1x100%	Induction Motor	Standby	400	3	4	3.7	7.6	720	80	0.89	0.0	DOL		1ECECM01						0	0	0	0	0	
	4	1BAMA104	Seal Air Fans B	1x100%	Induction Motor	Standby	400	3	4	3.7	7.6	720	80	0.89	0.0	DOL		1ECECM02						0	0	0	0	0	
	5	1BAMA105	Seal Air Fans C	1x100%	Induction Motor	Standby	400	3	4	3.7	7.6	720	80	0.89	0.0	DOL		1ECECM01						0	0	0	0	0	
1	6	1QGMC103	CO2 Compressor	1x100%	Induction Motor	Continuous	22kv	3	20000	18000	575	500	96	0.88	1.0	ASD		1ESES101						18000	0	0	20000	0	Rev 1 - Changed Voltage Rating from 11kV to 22kV
1	7	1PAMC101A	Instrument/Service Air Compressor A	1x100%	Induction Motor	Continuous	400	3	55	45	95	730	93	0.9	1.0	DOL		1ECEKL01						45	0	55	55	45	Rev 1 - Tag No Change "002" to "101"
1	8	1PAMC101B	Instrument/Service Air Compressor B	1x100%	Induction Motor	Standby	400	3	55	45	95	730	93	0.9	0.0	DOL		1ECEKL02						0	0	0	0	0	Rev 1 - Tag No Change "002" to "101"
	9	1QGMC103	Air Cooler for Air Compressor A	1x100%	Induction Motor	Continuous	400	3	7.5	5.6	14	700	80	0.88	1.0	DOL		1ECEKL01						5.6	0	7.5	7.5	5.6	
	10	1QGMC103	Air Cooler for Air Compressor B	1x100%	Induction Motor	Standby	400	3	7.5	5.6	14	700	80	0.88	0.0	DOL		1ECEKL02						0	0	0	0	0	
1	11	1CYME118	Fresh Amine Storage Tank Heaters	1x100%	Electric Heater	Continuous	400	3	11	10	17				0.7			1ECECM03						7	0	7.7	11	7	
1	12	1CYME119	Lean Amine Solvent Storage Tank Heater	1x100%	Electric Heater	Continuous	400	3	150	150	220				0.7			1ECECM03						105	0	105	150	105	
1	13	1WPM123	Process Water Tank Heater	1x100%	Electric Heater	Continuous	400	3	11	10	17				0.7			1ECECM03						7	0	7.7	11	7	
1	14	1WRME122	Softened Water Tank Heater	1x100%	Electric Heater	Continuous	400	3	5.5	5	9				0.7			1ECECM03						3.5	0	3.85	5.5	3.5	Rev 1 - Changed "Raw" to "Softened"
1	15	1CNMP101A	Rich Amine Pumps (Absorber 1) A	1x100%	Induction Motor	Continuous	6.6kv	3	900	789	90	600	95	0.88	1.0	DOL		1ESES102						789	0	0	900	0	Rev 1 - Added "Absorber 1" to descript.
1	16	1CNMP101B	Rich Amine Pumps (Absorber 1) B	1x100%	Induction Motor	Standby	6.6kv	3	900	789	90	600	95	0.88	1.0	DOL		1ESES102						789	0	0	900	0	Rev 1 - Added "Absorber 1" to descript.
1	17	1CNMP124A	Rich Amine Pumps (Absorber 2) A	1x100%	Induction Motor	Continuous	6.6kv	3	900	789	90	600	95	0.88	0.0	DOL		1ESES102						0	0	0	0	0	Rev 1 - Changed "C" to "Absorber 2 A", Tag No Change "101C" to "124A"
1	18	1CNMP124B	Rich Amine Pumps (Absorber 2) B	1x100%	Induction Motor	Standby	6.6kv	3	900	789	90	600	95	0.88	0.0	DOL		1ESES102						0	0	0	0	0	Rev 1 - Changed "D" to "Absorber 2 B", Tag No Change "101D" to "124B"
	19	1CNMP102A	Wash Water Recirculation Pump (Absorber 1) A	1x100%	Induction Motor	Continuous	6.6kv	3	373	319	37	600	95	0.88	1.0	DOL		1ESES102						319	0	0	373	0	
	20	1CNMP102B	Wash Water Recirculation Pump (Absorber 1) B	1x100%	Induction Motor	Standby	6.6kv	3	373	319	37	600	95	0.88	0.0	DOL		1ESES102						0	0	0	0	0	
	21	1CNMP104A	Wash Water Recirculation Pump (Absorber 2) A	1x100%	Induction Motor	Continuous	6.6kv	3	373	319	37	600	95	0.88	1.0	DOL		1ESES102						319	0	0	373	0	
	22	1CNMP104B	Wash Water Recirculation Pump (Absorber 2) B	1x100%	Induction Motor	Standby	6.6kv	3	373	319	37	600	95	0.88	0.0	DOL		1ESES102						0	0	0	0	0	
	23	1CNMP105A	Lean Amine Pump A	1x100%	Induction Motor	Continuous	6.6kv	3	900	802	90	600	95	0.88	1.0	DOL		1ESES102						802	0	0	900	0	
	24	1CNMP105B	Lean Amine Pump B	1x100%	Induction Motor	Standby	6.6kv	3	900	802	90	600	95	0.88	0.0	DOL		1ESES102						0	0	0	0	0	
	25	1CNMP106A	Flash Drum Pump A	1x100%	Induction Motor	Continuous	6.6kv	3	300	102	32	600	95	0.88	1.0	DOL		1ESES102						102	0	0	300	0	
	26	1CNMP106B	Flash Drum Pump B	1x100%	Induction Motor	Standby	6.6kv	3	300	102	32	600	95	0.88	0.0	DOL		1ESES102						0	0	0	0	0	
	27	1CNMP107A	Reflux Pump A	1x100%	Induction Motor	Continuous	400	3	45	22	80	770	93	0.88	1.0	DOL		1ECECM01						22	0	0	45	0	
	28	1CNMP107B	Reflux Pump B	1x100%	Induction Motor	Standby	400	3	45	22	80	770	93	0.88	0.0	DOL		1ECECM02						0	0	0	0	0	
	29	1QGMP108A	CO2 Product Sendout Pump A	1x100%	Induction Motor	Continuous	6.6kv	3	1865	911	185	550	96	0.88	1.0	DOL		1ESES102						911	0	0	1865	0	Rev 1 - Tag No Change "CN" to "QG"
	30	1QGMP108B	CO2 Product Sendout Pump B	1x100%	Induction Motor	Standby	6.6kv	3	1865	911	185	550	96	0.88	0.0	DOL		1ESES102						0	0	0	0	0	Rev 1 - Tag No Change "CN" to "QG"
	31	1BAMP109A	Flue Gas Fogger Water Supply Pump A	1x100%	Induction Motor	Continuous	400	3	37	30	65	820	86	0.89	1.0	DOL		1ECECM01						30	0	0	37	0	Rev 1 - Tag No Change "CN" to "BA"
	32	1BAMP109B	Flue Gas Fogger Water Supply Pump B	1x100%	Induction Motor	Standby	400	3	37	30	65	820	86	0.89	0.0	DOL		1ECECM02						0	0	0	0	0	Rev 1 - Tag No Change "CN" to "BA"
	33	1BAMP109C	Flue Gas Fogger Water Supply Pump C	1x100%	Induction Motor	Continuous	400	3	37	30	65	820	86	0.89	1.0	DOL		1ECECM01						30	0	0	37	0	Rev 1 - Tag No Change "CN" to "BA"
	34	1BAMP109D	Flue Gas Fogger Water Supply Pump D	1x100%	Induction Motor	Standby	400	3	37	30	65	820	86	0.89	0.0	DOL		1ECECM02						0	0	0	0	0	Rev 1 - Tag No Change "CN" to "BA"
	35	1CYMP110A	Fresh Amine Metering Pump A	1x100%	Induction Motor	Continuous	400	3	1.1	0.5	2.4	580	80	0.83	1.0	DOL		1ECECM01						0.5	0	0	1.1	0	
	36	1CYMP110B	Fresh Amine Metering Pump B	1x100%	Induction Motor	Standby	400	3	1.1	0.5	2.4	580	80	0.83	0.0	DOL		1ECECM02						0	0	0	0	0	
	37	1CYMP111A	Lean Amine Solvent Fill Pump A	1x100%	Induction Motor	Continuous	400	3	45	29	80	770	93	0.88	1.0	DOL		1ECECM01						29	0	0	45	0	
	38	1CYMP111B	Lean Amine Solvent Fill Pump B	1x100%	Induction Motor	Standby	400	3	45	29	80	770	93	0.88	0.0	DOL		1ECECM02						0	0	0	0	0	
2	39	1XWMP112A	Amine Waste Sump Pump A	1x100%	Induction Motor	Continuous	400	3	11	8.17	20.5	680	80	0.89	1.0	DOL		1ECECM01						8.17	0	0	11	0	Rev 2 - Tag No Change "T103" to "P112" Rev 1 - Tag No Change "P112" to "T103"
2	40	1XWMP112B	Amine Waste Sump Pump B	1x100%	Induction Motor	Standby	400	3	11	8.17	20.5	680	80	0.89	0.0	DOL		1ECECM02						0	0	0	0	0	Rev 2 - Tag No Change "T103" to "P112" Rev 1 - Tag No Change "P112" to "T103"
	41	1XWMP113A	Wastewater Forwarding Pump A	1x100%	Induction Motor	Continuous	400	3	7.5	7.5	14	700	80	0.88	1.0	DOL		1ECECM01						7.5	0	0	7.5	0	
	42	1XWMP113B	Wastewater Forwarding Pump B	1x100%	Induction Motor	Standby	400	3	7.5	7.5	14	700	80	0.88	0.0	DOL		1ECECM02						0	0	0	0	0	
	43	1SCMP114A	LP Condensate Return Pump A	1x100%	Induction Motor	Continuous	400	3	75	56	127	820	93	0.9	1.0	DOL		1ECECM01						56	0	0	75	0	Rev 1 - Tag No Change "CN" to "SC"
	44	1SCMP114B	LP Condensate Return Pump B	1x100%	Induction Motor	Standby	400	3	75	56	127	820	93	0.9	0.0	DOL		1ECECM02						0	0	0	0	0	Rev 1 - Tag No Change "CN" to "SC"
	45	1WLM115A	Sea Water Cooling Pump A	1x100%	Induction Motor	Continuous	6.6kv	3	1500	1500	150	550	96	0.88	1.0	DOL		1ESES102						1500	0	0	1500	0	
	46	1WLM115B	Sea Water Cooling Pump B	1x100%	Induction Motor	Standby	6.6kv	3	1500	1500	150	550	96	0.88	0.0	DOL		1ESES102						0	0	0	1500	0	
	47	1CYMP116A	Chemical Additive Metering Pump A	1x100%	Induction Motor	Continuous	400	3	2.2	2	4.37	600	80	0.87	1.0	DOL		1ECECM01						2	0	0	2.2	2	
	48	1CYMP116B	Chemical Additive Metering Pump B	1x100%	Induction Motor	Standby	400	3	2.2																				



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	49	1CYMP117A	Caustic Metering Pump A	1x100%	Induction Motor	Continuous	400	3	1.1	0.1	2.4	580	80	0.83	1.0	DOL		1ECECM01						0.1	0	0	1.1	0.1	
	50	1CYMP117B	Caustic Metering Pump B	1x100%	Induction Motor	Standby	400	3	1.1	0.1	2.4	580	80	0.83	0.0	DOL		1ECECM02						0	0	0	0	0	
	51	1WPMP119A	Absorber make-up water Pump A	1x100%	Induction Motor	Continuous	400	3	7.5	5.6	14	700	80	0.88	1.0	DOL		1ECECM01						5.6	0	0	7.5	0	
	52	1WPMP119B	Absorber make-up water Pump B	1x100%	Induction Motor	Standby	400	3	7.5	5.6	14	700	80	0.88	0.0	DOL		1ECECM02						0	0	0	0	0	
	53	1WLMP121A	Sea Water Booster Pump A	1x100%	Induction Motor	Continuous	400	3	224	200	422	720	95	0.89	1.0	DOL		1ECEKL01						200	0	0	224	0	
	54	1WLMP121B	Sea Water Booster Pump B	1x100%	Induction Motor	Standby	400	3	224	200	422	720	95	0.89	0.0	DOL		1ECEKL02						0	0	0	224	0	
	55	1QGMC103	CO2 Compressor Lube Oil Pumps A	1x100%	Induction Motor	Continuous	400	3	7.5	7.5	14	700	80	0.88	0.5	DOL		1ECECM01						3.75	0	0	7.5	3.75	
	56	1QGMC103	CO2 Compressor Lube Oil Pumps B	1x100%	Induction Motor	Continuous	400	3	7.5	7.5	14	700	80	0.88	0.5	DOL		1ECECM02						3.75	0	0	7.5	3.75	
	57	1BAMA101	Flue Gas Blower Lube Oil Pumps A	1x100%	Induction Motor	Continuous	400	3	4	3.75	7.6	720	80	0.89	0.5	DOL		1ECECM01						1.875	0	0	4	1.875	
	58	1BAMA101	Flue Gas Blower Lube Oil Pumps B	1x100%	Induction Motor	Continuous	400	3	4	3.75	7.6	720	80	0.89	0.5	DOL		1ECECM02						1.875	0	0	4	1.875	
	59	1BAMA102	Flue Gas Blower Lube Oil Pumps C	1x100%	Induction Motor	Continuous	400	3	4	3.75	7.6	720	80	0.89	0.5	DOL		1ECECM01						1.875	0	0	4	1.875	
	60	1BAMA102	Flue Gas Blower Lube Oil Pumps D	1x100%	Induction Motor	Continuous	400	3	4	3.75	7.6	720	80	0.89	0.5	DOL		1ECECM02						1.875	0	0	4	1.875	
	61	1SCMP120A	HP Condensate Return Pump A	1x100%	Induction Motor	Continuous	400	3	7.5	7.5	14	700	80	0.88	1.0	DOL		1ECECM01						7.5	0	0	7.5	0	
	62	1SCMP120B	HP Condensate Return Pump B	1x100%	Induction Motor	Standby	400	3	7.5	7.5	14	700	80	0.88	0.0	DOL		1ECECM02						0	0	0	0	0	
1	63	1PAMS105A	Instrument Air Dryer A	1x100%	Electric Heater	Continuous	400	3	11	10	17				1.0			1ECECM01						0	0	0	0	0	
1	64	1PAMS105B	Instrument Air Dryer B	1x100%	Electric Heater	Standby	400	3	11	10	17				0.0			1ECECM02						10	0	0	11	10	
	65	1CYMS103	Reclaimer Chemical Feed Package	1x100%	Induction Motor	Continuous	400	3	5.5	5	10.8	680	80	0.87	1.0	DOL		1ECECM01						5	0	0	5.5	0	
	66	1QGMS104	CO2 Drying Package	1x100%	Electric Heater	Continuous	400	3	11	10	17				1.0			1ECECM02						10	0	0	11	0	
2	67	1BAMD008A	Common Flue Gas Duct Isolation Dampers A	1x100%	Induction Motor	Standby	400	3	4	0	7.6	720	80	0.89	0.0	DOL		1ECECM01						0	0	0	0	0	Rev 2 - Added DOL Starting Rev 1 - Tag No Change "101" to "008", changed Rated Power from 5 to 4, and added Type
2	68	1BAMD008B	Common Flue Gas Duct Isolation Dampers B	1x100%	Induction Motor	Standby	400	3	4	0	7.6	720	80	0.89	0.0	DOL		1ECECM02						0	0	0	0	0	Rev 2 - Added DOL Starting Rev 1 - Tag No Change "101" to "008", changed Rated Power from 5 to 4, and added Type
2	69	1BAMD034A	Flue Gas Duct Isolation Damper (Absorber 1) A	1x100%	Induction Motor	Standby	400	3	4	0	7.6	720	80	0.89	0.0	DOL		1ECECM01						0	0	0	0	0	Rev 2 - Added DOL Starting Rev 1 - Tag No Change "102" to "034", changed Rated Power from 5 to 4, and added Type
2	70	1BAMD034B	Flue Gas Duct Isolation Damper (Absorber 1) B	1x100%	Induction Motor	Standby	400	3	4	0	7.6	720	80	0.89	0.0	DOL		1ECECM02						0	0	0	0	0	Rev 2 - Added DOL Starting Rev 1 - Tag No Change "102" to "034", changed Rated Power from 5 to 4, and added Type
2	71	1BAMD060A	Flue Gas Duct Isolation Damper (Absorber 2) A	1x100%	Induction Motor	Standby	400	3	4	0	7.6	720	80	0.89	0.0	DOL		1ECECM01						0	0	0	0	0	Rev 2 - Added DOL Starting Rev 1 - Tag No Change "103" to "060", changed Rated Power from 5 to 4, and added Type
2	72	1BAMD060B	Flue Gas Duct Isolation Damper (Absorber 2) B	1x100%	Induction Motor	Standby	400	3	4	0	7.6	720	80	0.89	0.0	DOL		1ECECM02						0	0	0	0	0	Rev 2 - Added DOL Starting Rev 1 - Tag No Change "103" to "060", changed Rated Power from 5 to 4, and added Type
2	73	1ANMG101	Emergency Diesel Generator		Generator	Continuous	400	3	600						0.0			1ECECM03						0	0	0	600	0	Rev 2 - Tag No Change "G001" to "G101"
2	74	1ANMG101	Emergency Diesel Gen Battery Charger		Control Power	Continuous	230	1	2	2	5				1.0			1ECECM03						2	2	2	2	2	Rev 2 - Tag No Change "G001" to "G101"
2	75	1ANMG101	Emergency Diesel Gen Heater		Control Power	Continuous	230	1	9	9	23				0.7			1ECECM03						6.3	9	0	9	6.3	Rev 2 - Tag No Change "G001" to "G101"
	76	1ESEYU01	Power Factor Correction Capacitors		Control Power	Continuous	110DC		0.5	0.5	4.5				1.0			1EDEAD01						0.5	0.5	0.5	0.5	0.5	
	77	1ESEVV01	CO2 Compressor ASD		Control Power	Continuous	110DC		2	2	18				1.0			1EDEAD01						2	2	2	2	2	
	78	1ESEVV02	Flue Gas Blower ASD - Blower A		Control Power	Continuous	110DC		1	1	9				1.0			1EDEAD01						1	1	1	1	1	
	79	1ESEVV03	Flue Gas Blower ASD - Blower B		Control Power	Continuous	110DC		1	1	9				1.0			1EDEAD01						1	1	1	1	1	
	80	1ESETP01	CCC Facility Transformer (Cooling Circuit)		Induction Motor	Continuous	As Req'd								1.0	DOL		1EDEAD01						0	0	0	0	0	
	81	1ESETP01	CCC Facility Transformer (Relay Panel)		Control Power	Continuous	110DC		1	0.5	9							1EDEAD01						0.5	0.5	0.5	0.5	0.5	
1	82	1ESETP02	Dead Time Transformer		Transformer	Continuous	6.6kv				3MVA				1.0			CCPP SWGR						0	0			0	Rev 1 - Changed Type from "Control Power" to "Transformer", Voltage Rating and Rated Power
1	83	1ESETP03	Stepdown Transformer		Transformer	Continuous	22kv				15MVA				1.0			1ESES101											Rev 1 - Changed Type from "Control Power" to "Transformer", Voltage Rating and Rated Power
1	84	1ECETP01	Load Center Transformer 1		Transformer	Continuous	22kv				2500kVA				1.0			1ESES101						0	0			0	Rev 1 - Changed Type from "Control Power" to "Transformer", Voltage Rating and Rated Power
1	85	1ECETP02	Load Center Transformer 2		Transformer	Continuous	22kv				2500kVA				1.0			1ESES101						0	0			0	Rev 1 - Changed Type from "Control Power" to "Transformer", Voltage Rating and Rated Power
	86	1ESES101	22kV Switchgear (Relays & Lights, Coils)		Control Power	Continuous	110DC		5	4.1	45				1.0			1EDEAD01						4.1	4.1	5	5	4.1	



Rev	Item No.	Tag No.	Item Description	Capacity Per Component	Type	Type of Operation	Voltage (Input Rating)	Phase	Rated Power (Note 1) kW	Required Power (Note 1) kW	Nominal Sizing Current (Note 1)	Starting Current (% of Nominal) (Note 1)	Efficiency (Note 1)	Power Factor (Note 1)	Diversity Factor of Load	Starting Method	Speed (Note 2)	Connected to Switchgear (Note 4)	Degree of Protection (Note 2)	Weight (Note 2)	Maker (Note 2)	Type (Note 2)	Supplier (Note 2)	Normal Operation Required Power (Note 1) kW	Critical Load (Battery or UPS) Required Power (Note 1) kW	Emergency Load (Diesel) Required Power (Note 1) kW	Max Load (Test Block) Required Power (Note 1) kW	Maintenance Loads (Dead Time Xfir) kW	Remarks
	87	1ESES102	6.6kV Switchgear (Relays & Lights, Coils)		Control Power	Continuous	110DC		11	10.6	100				1.0			1EEDAD01						10.6	10.6	11	11	10.6	
	88	1ECEKL01	400V Load Center 1		Control Power	Continuous	110DC		1	0.5	9				1.0			1ECETP01						0.5	0.5	1	1	0.5	
	89	1ECEKL02	400V Load Center 2		Control Power	Continuous	110DC		1	0.5	9				1.0			1ECETP02						0.5	0.5	0.5	1	0.5	
	90	1ECECM01	400V MCC 1		Control Power	Continuous	110DC/230AC	1	1.5	1.4	14				1.0			1ECEKL01						1.4	1.4	1.5	1.5	1.4	
	91	1ECECM02	400V MCC 2		Control Power	Continuous	110DC/230AC	1	1.5	1.4	14				1.0			1ECEKL02						1.4	1.4	1.5	1.5	1.4	
	92	1ECECM03	Essential MCC		Control Power	Continuous	110DC/230AC	1	1.5	1.4	14				1.0			1ECEKL01/2						1.4	1.4	1.5	1.5	1.4	
1	93	1EDED01	Battery Charger A		Control Power	Continuous	110DC		80	12	727				0.5			1ECECM03						6	6	6	6	6	Rev 1 - Tag No. Change "DU01" to "DC01"
1	94	1EDED02	Battery Charger B		Control Power	Continuous	110DC		80	12	727				0.5			1ECECM03						6	6	6	6	6	Rev 1 - Tag No. Change "DU02" to "DC02"
	95	1EDED01	110V Lead Acid Battery 1		Battery	Continuous	110DC								1.0			1EEDAD01											
	96	1EDED02	110V Lead Acid Battery 2		Battery	Continuous	110DC								1.0			1EEDAD01											
	97	1EEDAD01	110V DC Bus		Panelboard	Continuous	110DC								1.0			1EDED01/2											
	98	1EEDAD02	110V DC Panel Board		Panelboard	Continuous	110DC								1.0			1EEDAD01											
	99	1EEDAD03	24V DC Switchboard		Panelboard	Continuous	24DC								1.0			1EDEV01/2											
	100	1EDEV01	110VDC/24VDC Converter 1		Control Power	Continuous	110DC		Note 3	Note 3					1.0			1EEDAD01											
	101	1EDEV02	110VDC/24VDC Converter 2		Control Power	Continuous	110DC		Note 3	Note 3					1.0			1EEDAD01											
	102	1EUEAA01	400/230V Safe Switchgear		Control Power	Continuous	400/230	3	Note 3	Note 3					1.0			1EUEVT01/2											
	103	1EUEVT01	Inverter 1		Control Power	Continuous	110DC		60	Note 3					0.5			1EEDAD01											
	104	1EUEVT02	Inverter 2		Control Power	Continuous	110DC		60	Note 3					0.5			1EEDAD01											
	105	Later	MOVS		Induction Motor	Standby	400	3	As Req'd	As Req'd					0.1	DOL		1ECECM01											
1	106	Later	Control Bldg HVAC Units A	1x100%	HVAC	Continuous	400	3	110	77	158				0.8			1EUEAA01						61.6	0	88	110	61.6	Rev 1 - Added Rated Power and Required Power Values
1	107	Later	Control Bldg HVAC Units B	1x100%	HVAC	Standby	400	3	110	77	158				0.8			1EUEAA01						0	0	0	110	61.6	Rev 1 - Added Rated Power and Required Power Values
1	108	Later	Electric Building HV Units		Heating and Fans	Continuous	400	3	80	56	115				0.8			1EUEAA01						44.8	0	64	80	44.8	Rev 1 - Added Rated Power and Required Power Values
1	109	Later	Vent Fans (Compressor Building)		Fans	Continuous	400	3	100	70	144				1.0			1EUEAA01						70	0	100	100	70	Rev 1 - Added Rated Power and Required Power Values
1	110	Later	Vent Fans (Blower Buildings)		Fans	Continuous	400	3	64	45	92				1.0			1EUEAA01						45	0	64	64	45	Rev 1 - Added Rated Power and Required Power Values
1	111	Later	Stores/Workshop HV Units		Heating and Fans	Continuous	400	3	82	57	118				0.8			1EUEAA01						45.6	0	65.6	82	45.6	Rev 1 - Added Rated Power and Required Power Values
	112	Later	ESD (Control Cabinet)		Power Supply	Continuous	230	1	1	0.7	4				1.0			1EUEAA01						0.7	0.7	1	1	0.7	
	113	Later	PSD (Control Cabinet)		Power Supply	Continuous	230	1	0.5	0.36	2				1.0			1EUEAA01						0.36	0.36	0.5	0.5	0.36	
	114	Later	CEMS		Power Supply	Continuous	230	1	2.5	2.5	11				1.0			1EUEAA01						2.5	2.5	2.5	2.5	2.5	
	115	Later	Communication Systems		Power Supply	Continuous	As Req'd								1.0			1EUEAA01						0	0	0	0	0	
	116	Later	Motor Heaters		Electric Heater	Standby	230	1							0.2			230 Panelboard						0	0	0	0	0	
	117	Later	F&G Detection System		Power Supply	Continuous	230	1	1	0.7	4				1.0			1EUEAA01						0.7	0.7	1	1	0.7	
1	118	Later	Electrical Heat Tracing		Electrical Heaters	Continuous	400/230	1	250	200	360				0.7			1ECEKL01						140	0	175	250	140	Rev 1 - Changed Voltage Rating from 230 to 400/230
	119	Later	DCS (Control Cabinet)		Power Supply	Continuous	230	1	0.5	0.36	2				1.0			1EUEAA01						0.36	0.36	0.5	0.5	0.36	
1	120	Later	Lighting		Lighting	Continuous	400/230	1	160	158	230				1.0			1ECEKL01						158	0	64	160	158	Rev 1 - Changed Voltage Rating from 230 to 400/230
	121	Later	IMS Server		Power Supply	Continuous	230	1	1	0.76	4				1.0			1EUEAA01						0.76	0.76	1	1	0.76	
	122	Later	Domain Controller		Power Supply	Continuous	230	1	1	0.76	4				1.0			1EUEAA01						0.76	0.76	1	1	0.76	
	123	Later	Interface Server		Power Supply	Continuous	230	1	1.5	1.5	7				1.0			1EUEAA01						1.5	1.5	1.5	1.5	1.5	
	124	Later	DCS Operator Station		Power Supply	Continuous	230	1	2	1.7	9				1.0			1EUEAA01						1.7	1.7	2	2	1.7	
	125	Later	DCS Engineer Station		Power Supply	Continuous	230	1	1	0.86	4				1.0			1EUEAA01						0.86	0.86	1	1	0.86	
	126	Later	CEMS DAHS		Power Supply	Continuous	230	1	1	0.76	4				1.0			1EUEAA01						0.76	0.76	1	1	0.76	
	127	Later	Historian		Power Supply	Continuous	230	1	0.25	0.22	1				1.0			1EUEAA01						0.22	0.22	0.25	0.25	0.22	
	128	Later	Printer - Laser		Power Supply	Continuous	230	1	2	1.9	9				1.0			1EUEAA01						1.9	1.9	2	2	1.9	
	129	Later	132" Multiscreen		Power Supply	Continuous	230	1	2.5	2.1	11				1.0			1EUEAA01						2.1	2.1	2.5	2.5	2.1	
	130	Later	Compressor Building I/O		Power Supply	Continuous	230	1	2.5	2.2	11				1.0			1EUEAA01						2.2	2.2	2.5	2.5	2.2	
	131	Later	Electrical Building I/O		Power Supply	Continuous	230	1	0.5	0.5	2				1.0			1EUEAA01						0.5	0.5	0.5	0.5	0.5	
	132	Later	Brine Solution Skid		Induction Motor	Continuous	400	3	3	2	5					DOL		1ECECM01											Rev 1 - Added Item
2	133	1WRMP122A	Raw (Softened) Water Supply Pumps A	1x100%	Induction Motor	Continuous	400	3	1	3	2					DOL		1ECECM01											Rev 2 - Changed Rated Power, Changed Name from "Softened" to "Raw (Softened)" added DOL Starting Rev 1 - Added Item
2	134	1WRMP122B	Raw (Softened) Water Supply Pumps B	1x100%	Induction Motor	Standby	400	3	1	3	2					DOL		1ECECM02											Rev 2 - Changed Rated Power, Changed Name from "Softened" to "Raw (Softened)" added DOL starting Rev 1 - Added Item



Rev	Item No.	Tag No.	Item Description	Capacity Per Component	Type	Type of Operation	Voltage (Input Rating)	Phase	Rated Power (Note 1) kW	Required Power (Note 1) kW	Nominal Sizing Current (Note 1)	Starting Current (% of Nominal) (Note 1)	Efficiency (Note 1)	Power Factor (Note 1)	Diversity Factor of Load	Starting Method	Speed (Note 2)	Connected to Switchgear (Note 4)	Degree of Protection (Note 2)	Weight (Note 2)	Maker (Note 2)	Type (Note 2)	Supplier (Note 2)	Normal Operation Required Power (Note 1) kW	Critical Load (Battery or UPS) Required Power (Note 1) kW	Emergency Load (Diesel) Required Power (Note 1) kW	Max Load (Test Block) Required Power (Note 1) kW	Maintenance Loads (Dead Time X firm) kW	Remarks	
1	135	IESEYU01	Power Factor Correction Capacitors		Capacitor	Continuous	22kv		20MVAR									IESES101												Rev 1 - Added Item
1	136	IESETP01	CCC Facility Transformer		Transformer	Continuous	20kv		50MVA									CCPP IPB												Rev 1 - Added Item
2	137	IWDMP125A	Deminerlized Water Pump A	1x100%	Induction Motor	Continuous	400	3	1	3	2					DOL		IECECM01												Rev 2 - Added Item
2	138	IWDMP125B	Deminerlized Water Pump B	1x100%	Induction Motor	Standby	400	3	1	3	2					DOL		IECECM02												Rev 2 - Added Item

Notes:

1. Ratings are based estimates and will be finalized after equipment is procured.
2. Data will be completed after equipment is procured.
3. Load is included with individual consumer.
4. Load connections are preliminary and will be finalized during detailed design. When practicable, redundant loads will be connected to separate busses.

Summary of Revision:

Rev 1 - Revised per 10112936-S-FIFB-E-0060 (added values in "Nominal Sizing Current", "Starting Current", "Efficiency", and "Power Factor") and as noted in remarks.  
 Rev 2 - Revised as noted in remarks.