Electrical Load Tabulation
ILC-Americas

SLAC
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Electrical Power Distribution Systems

Defined as

"RF"
"Conventional"
"Emergency"

RF Power

Includes:

- Modulators/Klystrons

Conventional Power

Includes:

- Lighting (Non-Emergency)
- NC Magnets
- Water Systems
- Cryo Systems
- Non Life-Safety related HVAC

Emergency Power

Includes:

- Emergency Lighting
- Sump Pumps
- Supply and Exhaust Ventilation Systems
- Fire Alarm Systems

All Emergency Systems normally powered via Conventional Power System with Generator Backup

BASIS OF TABULATION

- All Loads Considered **PRELIMINARY**.
- All Values In Watts, kiloWatts or Megawatts as noted.
- No Place Holders from Previous Spreadsheets Carried Over (2001/2003).
- Tabulation Revised as Input is Made Available (Constant Process).

BASIS OF TABULATION

- Tabulation developed for Machine Operating timeframe.
- Valid only for 2 Tunnel Design (Full Power Machine).
- No diversity included for any calculations (Diversity is not required for RF or technical loads).
- Losses in power distribution system and motor efficiency not included or accounted for.
- Brake Horsepower for rotating loads utilized when provided.
- 20°F delta values utilized for water system values.

SLAC vs Vancouver

MAJOR CHANGES

	SLAC MW	VANCOUVER MW	NET MW
RF	133.2	115.0	+18.2
CRYO	35.0	74.3	-39.3
BDS (NC MAGNETS)	17.3	71.4	-54.1
OTHERS			-9.2
TOTALS	273.9	358.3	-84.4

ELECTRICAL LOAD TABULATION

AREA SYSTEM	RF	CONV	NC MAGNETS	WATER SYSTEMS	CYRO	EMER	TOTAL (by Area)	NOTES
SOURCES e-	17.86	0.05	3.48	1.14	0.00	1.09	**23.62**	
SOURCES e+		0.05			0.00	1.09	**1.14**	
DR	14.00	0.05	14.01	1.93	3.56	6.17	**39.73**	
RTML	8.40	3.29	3.22	1.42	2.48	1.68	**20.51**	
MAIN LINAC	92.98	22.33	1.41	13.21	28.70	3.29	**161.92**	
BDS	0.00	0.03	17.30	0.00	0.24	0.29	**17.86**	14mr Values for NC Magnets
DUMPS	0.00	3.23	0.00	3.74	0.00	2.20	**9.17**	
TOTAL (by System)	***133.2***	***29.0***	***39.4***	***21.5***	***35.0***	***15.8***		

273.9 **MW**

History

SLAC	133.2	29.0	39.4	21.5	35.0	15.8	273.9	MW
Vancouver	115.0	227.5				15.8	358.3	MW