

BCHP Screening Tool

- Under development by DOE/ORNL.
- Primary use: Screening of CHP applications in commercial buildings using DOE-2 simulation engine
- Data libraries: Generation equipment, HVAC equipment, utility rates, weather, 14 specific building types (e.g., hospital, office, hotel, school, retail)
- CHP applications: Hot water, chilled water, space heating
- Analysis duration/time step: 1 year; monthly
- Economic analyses: not available at this time
- Cost: TBD (currently in beta test)

Input to BCHP Screening Tool Is Through On-screen Spreadsheet

BCHP Screening Tool powered by DoeRayMe - [BCHP Screening Tool - untitled.drm]

File Edit View Insert Window Help

Open Save Print Copy Run

Table Graph Text

INPUT	Parameter	Units	A	B
	Building Type			Hospital
Location			Illinois Chicago 41.98 87.9	Illinois Chicago 41.98 87.9
Length of Building	feet		150	150
Width of Building	feet		150	150
Number of Floors			1	1
Basement Present			No	No
Story Height	feet		12	12
Building Rotation	degrees		0	0
Equipment				
Lead Space Cooling			centrifChill York YK_850_...	sfseAbs Trane ABSC-11A-6psig 945
Lag Space Cooling			centrifChill York YK_850_	sfseAbs Trane ABSC-11A-6psig 945
Desiccant System			None	None
Heating Boiler			Steam Firetube Cleaver-Brooks CB-Stm10-800 8	Steam Firetube Cleaver-Brooks CB-Stm10-800 8
Service Water Heater			Gas Gas-fired hot water boiler Generic 203000	Gas Gas-fired hot water boiler Generic 203000
Generator			None Non_None 0	Engine Caterpillar G3412 NA 250
Chilled Water Pumps			Constant Speed	Constant Speed
Hot Water Pumps			Constant Speed	Constant Speed
Cooling Tower			TwoSpeed Generic Approach12 200	TwoSpeed Generic Approach12 200
Cool Storage			None 0	None 0
Hot Storage			None 0	Chilled water Generic 36 Thermal energy storag
Equipment Sizing				
<i>is ignored</i>				
RESULT	Annual Electricity Consumption			
	Lights	kWh	-	-
	Equipment	kWh	-	-
	Heating	kWh	-	-
	Cooling	kWh	-	-
	Tower	kWh	-	-

Status 6/27/2002 11:03 AM

start CHP software2.ppt Eudora - [In] THE NEWS DESK... BCHP Screening ... 11:03 AM

BCHP Screening Tool Output Is Through On-screen Spreadsheet

BCHP Screening Tool powered by DoeRayMe - [BCHP Screening Tool - untitled.drm]

File Edit View Insert Window Help

Open Save Print Copy Run

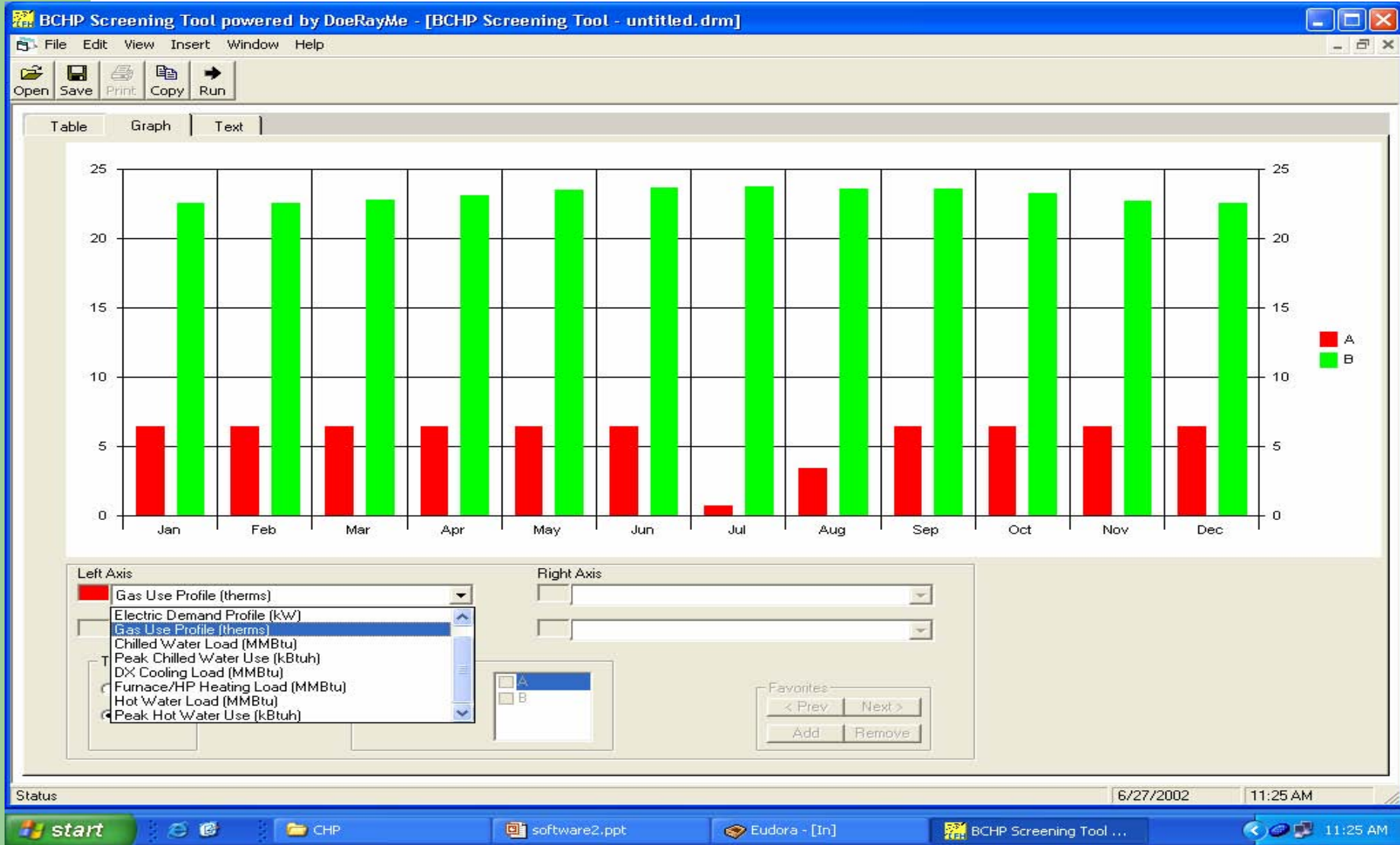
Table Graph Text

INPUT		Parameter	Units	A	B
		Building Description			
		Building Type		Hospital	Hospital
		Location		Illinois Chicago 41.98 87.9	Illinois Chicago 41.98 87.9
RESULT		Annual Electricity Consumption			
		Lights	kWh	323663.	323663.
		Equipment	kWh	166075.	166075.
		Heating	kWh		
		Cooling	kWh	44984.	3108.
		Tower	kWh	18024.	42635.
		Pump and Misc	kWh	4496.	4496.
		Ventilation Fans	kWh	97928.	97928.
		Refrigeration	kWh		
		Supplemental Heat	kWh		
		Service Water Heat	kWh		
		Total	kWh	655169.	637905.
		Annual Gas Consumption			
		Heating	MMBtu	3143.8	679.6
		Cooling	MMBtu		13229.3
		Supplemental Heat	MMBtu		
		Service Water Heat	MMBtu		
		Miscellaneous	MMBtu		
		Generator	MMBtu		2292.5
		Total	MMBtu	3143.8	16201.3
		Annual Generation Details			
		Utility Supplied	kWh	655168.9	399789.3
		On-site Generation	kWh		238115.5
		Boiler Heat	MMBtu	764.5	6246.9

Status 6/27/2002 11:22 AM

start CHP software2.ppt Eudora - [In] BCHP Screening Tool ... 11:22 AM

... And A Selection of Graphs



BCHP Screening Tool Output

- Annual and monthly electricity and gas demand and consumption
- Building energy loads
- Economic analysis results not available at this time - under development