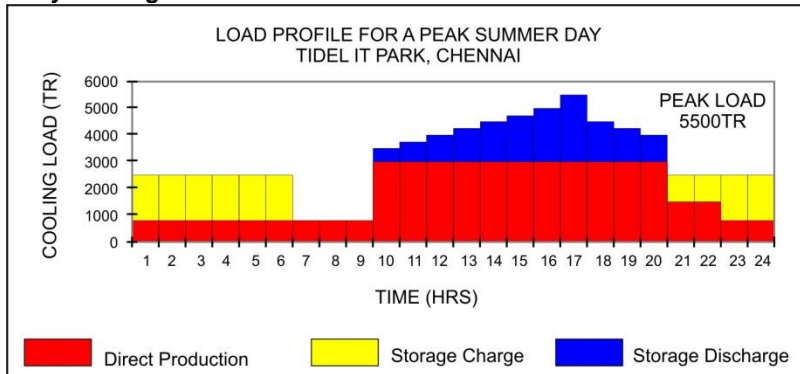


## TIDEL PARK, CHENNAI



### The Situation

#### Daily Cooling Load Profile with TES



Thermal Storage	24,000 TR-HRS
Screw Chillers	4 Groups (3 X 250 TR each)
Plate Heat Exchangers	3 Units (2000 TR cooling capacity each)

### The Solution

#### Proposed (Installed) System

Initial Cost Comparison		
Description	Conventional AC System	Thermal Storage AC system
Cooling System Installation Cost	1375.00	1374.00
Electrical Installation Cost	571.17 (7600 kVA)	326.78 (4400 kVA)
Development Charges to Electricity Board	19.00 (7600 kVA)	11.00 (4400 kVA)
<b>Total</b>	<b>1965.17 (114.80%)</b>	<b>1711.78 (100 %)</b>
Annual Operating Cost (Estimates)		
Energy & M D Charges	614.04	556.53
Energy Charges @ Rs. 3.45/ kWh		
M D Charges @ Rs. 170/kVA		
Maintenance Expenses	41.25	25.62
<b>Total</b>	<b>655.29 (112.56%)</b>	<b>582.15 (100 %)</b>

### The Results

#### Actual Savings Achieved

Maximum Demand Savings: 1000 kVA / mths x Rs 300 / kVA-Mths = Rs. 36,00,000 per year  
 Energy charges savings: Rs. 440,000 for peak month. Rs. 42,24,000 per year

Other Savings:

#### Additional savings due to Installation of Smaller TRANSFORMER with TES SYTEM

Transformer losses : About 1%  
 Losses : 0.01 x 3200 x 0.8 = 25.6 KWH  
 Savings : 25.6 x 24 x 30 x Rs. 4/ KWH  
 : Rs. 73,728 per month  
 : Rs. 8,84,736 per year

**Total Savings per annum : Rs. 87,08,736 (Lower initial investment)**