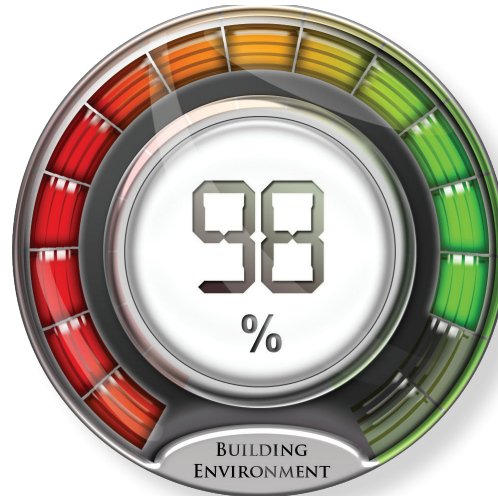# Environmental Index
## Balancing Efficiency with Comfort



Soaring energy prices and a growing environmental consciousness have renewed everybody's focus on sustainability, energy efficiency, and minimizing building energy consumption. Facility managers know too well that sacrificing human comfort costs even more in terms of lost productivity and revenue. Comfort is influenced by temperature, relative humidity, gaseous contaminants, lighting, dress, and other factors. So the challenge is how to measure comfort objectively.

Our Environmental Index provides a simple and effective solution. Starting with temperature as a key component of comfort, the Environmental Index, expressed as a percentage, reflects how close the zone temperature is to the effective heating and cooling setpoints. Accessed through a browser using WebCTRL®, the Environmental Index is shown on an easily read analog gauge, using the red segments to indicate poor environments, and graduating to green as conditions improve and the Environmental Index begins to approach 100%.

The Environmental Index can also use relative humidity (measured at the zone or return air) as well as contaminants like $CO_2$. Every zone, area, floor, and building can be simply calculated, weighted for importance, trended, and reported. The Environmental Index is a powerful tool to help facility managers identify operational problems, and manage energy conservation measures to ensure sustainable performance.
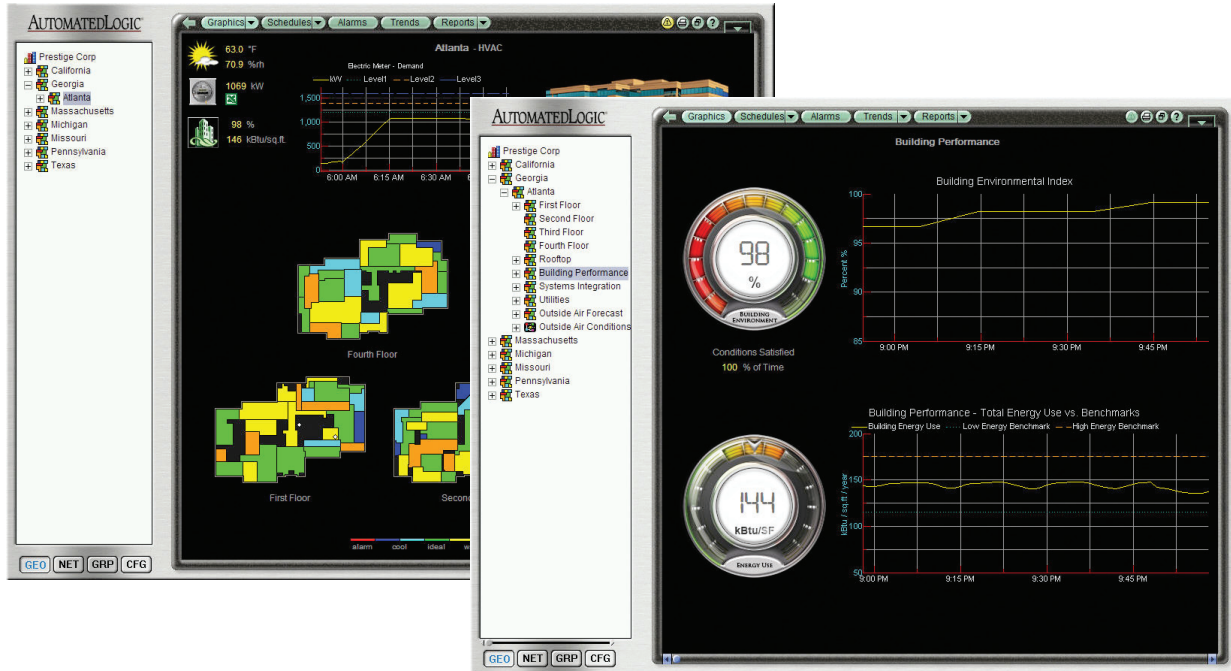
## Key Features and Benefits

- Building Environmental Index is calculated during occupancy for every zone, trended, and reported as an easily understood percentage.

- Environmental Index can easily be rolled-up per area, tenant and building.

- Dynamically displayed on WebCTRL's Energy versus Environmental Index Dashboard.

- Energy efficiency of the building can be directly compared to the environment.

- Environmental performance reports are generated automatically in Adobe Acrobat PDF and Microsoft Excel.

- LEED EB EA Credit 3.3 - WebCTRL reports percentage of time comfort is maintained on a floor weighted basis.

- Identifies areas where future Energy Conservation Measures (ECM's) will yield the best R.O.I.

- Helps facility managers identify problem areas quickly.

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# Environmental Index
## Balancing Efficiency with Comfort





Crosby Integrated School District, near Houston, Texas, is testimony to the effectiveness of the Environmental Index. Over the course of just six months, the school system reduced their energy consumption by 1.6 million KWh, saved $131,000, and improved their environmental comfort substantially. The Environmental Index made it easy to compare comfort versus energy consumption, revealing several areas for improvement.



### Building Environmental Performance

Location: Prestige Corp / Georgia / Atlanta     Run Date: 9/17/2008 7:01:31

| Name | Schedule | Average Zone Environmental Index % | Minimum Zone Environmental Index % | LEED 3.3 Percent Time Satisfied | Energy kBtu/hr/Sq.ft | Cooling Setpoint | Zone Temp | Heating Setpoint | CFM Setpoint | CFM Actual | Damper Position % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Conference Room | Occupied | 100.0 | 100.0 @ 7:01:10 AM | 99.6 | 22.4 | 74.9 | 75.9 | 70.9 | 850.0 | 850.0 | 100.0 |
| Cafeteria | Occupied | 90.0 | 90.0 @ 7:01:10 AM | 100.0 | 133.4 | 71.0 | 72.3 | 68.0 | 4,500.0 | 4,500.0 | 90.0 |
| Marketing | Occupied | 100.0 | 100.0 @ 7:01:10 AM | 100.0 | 4.8 | 73.0 | 72.5 | 69.0 | 100.0 | 98.6 | 19.5 |
| Accounting | Occupied | 100.0 | 100.0 @ 7:01:10 AM | 100.0 | 4.3 | 75.0 | 72.0 | 71.0 | 100.0 | 98.6 | 19.5 |
| Sales | Occupied | 100.0 | 100.0 @ 7:01:10 AM | 100.0 | 4.3 | 73.0 | 71.8 | 70.0 | 100.0 | 98.6 | 19.5 |
| Foyer | Occupied | 100.0 | 100.0 @ 7:01:10 AM | 100.0 | 4.4 | 74.0 | 73.0 | 71.0 | 100.0 | 98.6 | 32.4 |

Export as Excel or PDF

Facility Managers now have a powerful tool in their arsenal to minimize energy consumption, maximize comfort, and tackle sustainable building operations.

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