



LET'S SAVE ENERGY WITH ENERLYSIS

In a commercial building, HVAC typically uses around 40 percent of the total electrical consumption. We, at Airef, have started 'Enerlysis', a program dedicated to device methodologies and products aimed at bringing down this consumption substantially in a phased and structured manner.

Right from analyzing the existing consumption patterns, finding the optimization opportunities, and studying the feasibility, to selecting the right techniques and implementing them to reduce the energy consumption, we do it all for you!

Contact us today to achieve the desired reduction in HVAC electricity bills in the least possible time.

POWERED BY

AIREF

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EVERYTHING IS ENERGY!

ENERGY-SAVING CONCEPTS FROM THE HOUSE OF AIREF

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Airef is one of the leading manufacturers of energy-efficient and modern air handling equipment since 1982, and with a huge knowledge base in the field, Airef has launched 'Enerlysis', a program to use its resources to fuel a movement in the direction of making HVAC systems, both old and new, highly energy efficient. Airef aims at tapping the enormous potential in the form of energy being wasted in a building's HVAC system because of less efficient components, obsolete technologies, lack of maintenance and faulty designs.

THE 3-R : REDUCE. REUSE. RECYCLE.

Our 3-R approach of 'Reduce, Reuse & Recycle' is designed to save this energy in a systematic manner by following certain logically sequenced steps, tweaking the existing system minimally and implementing services that upkeep the changes without much effort:

REDUCE

We aim at reducing the energy demand and subsequent consumption of a facility's HVAC system and creating low-energy building environments.

REUSE

We attempt to upgrade and use the existing, refurbished components as much as possible, so as to lower the cost of the entire energy-saving project.

RECYCLE

We believe in recycling of HVAC waste into useful materials and disposing of the non-recyclable waste according to the relevant norms.

OUR SERVICES



ENERGY ANALYSIS



ENERGY OPTIMIZATION



HVAC RETROFITTING



ENERGY SAVING USING AI

1. ENERGY ANALYSIS

The first-step where our expert energy analysts visit the site and conduct a deep study of the existing HVAC system. The general steps performed are:

a. Collecting ratings and energy data of existing HVAC equipment like AHU, chillers, condensing units, pumps, sensors, BMS etc.

b. Finding energy consumption patterns and possible energy saving opportunities.

c. Preparing action plans, necessary drawings, cost-analysis, calculating pay-back period and return on investment, making schedules

d. Calculating time-lines & making schedules.

2. ENERGY OPTIMIZATION

This step involves in-depth working on the key optimization opportunities such as:

a. System supervisory control optimizations

b. Plant control parameter optimizations

c. Ventilation & air flow optimizations

d. Variable speed based optimizations

e. Best practice HVAC operation & maintenance

3. HVAC RETROFITTING

Some of the above optimizations require retrofitting of components, such as:

a. Retrofitting of electronically commutated (EC) fans, replacing conventional fans

b. Retrofitting of electronic expansion valves, replacing thermostatic expansion valves

c. Retrofitting of microprocessor based programmable controllers, replacing conventional temperature controllers

d. Retrofitting of VFD operated secondary chilled water pumps

e. Retrofitting of waste-heat recovery systems

4. ENERGY SAVING USING AI

The emerging revolution of Artificial Intelligence (AI) is used to optimize HVAC system of a building :

a. Using AI-powered Building Management Systems (BMS)

b. Forecasting energy requirements by analyzing weather patterns & using historic data.

c. AI can be used for predictive maintenance, reducing energy losses & downtime

d. Managing peak energy demand efficiently

e. Predicting future energy use to effectively reduce emissions & carbon footprint

