

energymasterplan@bpu.state.nj.us

From: Richard N. Foster, Jr., President
ZONEFIRST™

I would like to comment on the NJ Energy Master Plan and provide input for any sections regarding HVAC Systems and their efficiency. My company has been manufacturing zone damper controls for HVAC Systems since the early 1960s here in NJ. Our zone damper systems provide significant energy savings over typical systems using only thermostat with no automatic damper controls. Savings of 20% can be documented and even higher results can be achieved depending on the size and number of zones and setbacks per day.

Zone Control can be related to having a light switch in every room of the home. You would never think of having just one light switch for the whole house turning all lights on and off at the same time. However with most HVAC systems there is only one thermostat centrally located in the home, typically in a hallway, living room or often the dining room. This one thermostat controls the temperature for the whole house. When it requires heating or cooling, the conditioned air is sent everywhere, even when you might only be in one area of the home. This is a tremendous waster of energy when you are only occupying say the upstairs bedroom area, why heat or cool the downstairs living area. Every two floor home should be zoned just between upstairs and downstairs.

Often two, or sometimes more, HVAC Units may be used for zoning a home or office in order to achieve zoning. True energy savings can be realized by automatic dampers controlled by individual room thermostats that provide the ability shut off rooms that are not occupied or may already be comfortable. Zoning prevents over conditioning rooms that wastes energy. As the homes have gotten larger so has their need for heating and cooling. However larger homes have many seldom used rooms such as extra bedrooms, media room, exercise rooms etc that are seldom used but often always heated and cooled.

Zoning saves energy by only heating or cooling rooms or zones of the home and office and shutting off unused rooms. The master plan states a goal of energy consumption by 30%. Zoning can provide 20% by itself and be a simple and affordable addition to any HVAC System. In many homes where the duct work is accessible zoning can be installed to split upstairs and downstairs for less than \$2,000.00. In homes where zoning may have to have the motorized dampers at each outlets the cost of the additional dampers, their wiring and labor to install may be as high as \$4,000.00.

I want to stress that an energy plan that establishes minimum furnace and/or air conditioning standards without addressing the whole system, including insulation, duct leakage and zoning is only window dressing. The HVAC System is only part of the whole house system. Producing efficient heating and cooling and not caring how is delivered, via the ductwork and zone dampers, and how it is protected to maintain the zone temperature, through insulation, is not a comprehensive plan but only window dressing.

I offer my services to those crafting this plan and strongly urge those drafting this plan also include the HVAC Industry stakeholders. These are the manufacturers of the Air Conditioning, Heating and Refrigeration Institute, AHRI who sets the standards for industry; the distributors of these products through HARDI, the Heating, Air Conditioning and Refrigeration Distributors International and the installers of ACCA, Air Conditioning Contractors of America. These are just three of the organizations that the state should be partnering with to make this plan effective and show actual energy conservation in the coming years. I am an active member in all of these trade associations and others who truly want to partner with government for effective energy plans and legislation.

I would appreciate the opportunity to address these items at an upcoming EMP meeting, ideally the July 15 meeting in Trenton.

Sincerely,

Richard N. Foster, Jr., President
ZONEFIRST™
55 Bushes Lane
Elmwood Park, NJ 07407-3204 USA
201-794-8004 x225
201-794-1359 FAX
www.zonefirst.com



ZONEFIRST™

KAL FLOOR SECTION
3/4" UDLX FLY LINED + NAILED
2X10 #2HF @ 16" O.C.
4X10 ZDF BEAMS on 4X4 #2DF POSTS
R-11 REVERSE INSUL BATT

**Providing Comfort
In Any Room...At Any Time!**

ZONEFIRST™

Makes Controlling Heat from Room to Room as Easy as Controlling Your Lights

ZONEFIRST Solves the Problem of Some Rooms Being Too Warm While Other Rooms are Too Cold

If every room of your home was equal, one thermostat could control every room to the same temperature set on the thermostat. The simple fact is that every room is not equal. The size of each room; the level on which it sits; the direction it faces; how much window area there is; how the room is used and who uses it are factors that affect the temperature and comfort level. The fact is one thermostat is not enough.

Multiple Zone Thermostats and One HVAC System Ensures Maximum Comfort and Energy Savings

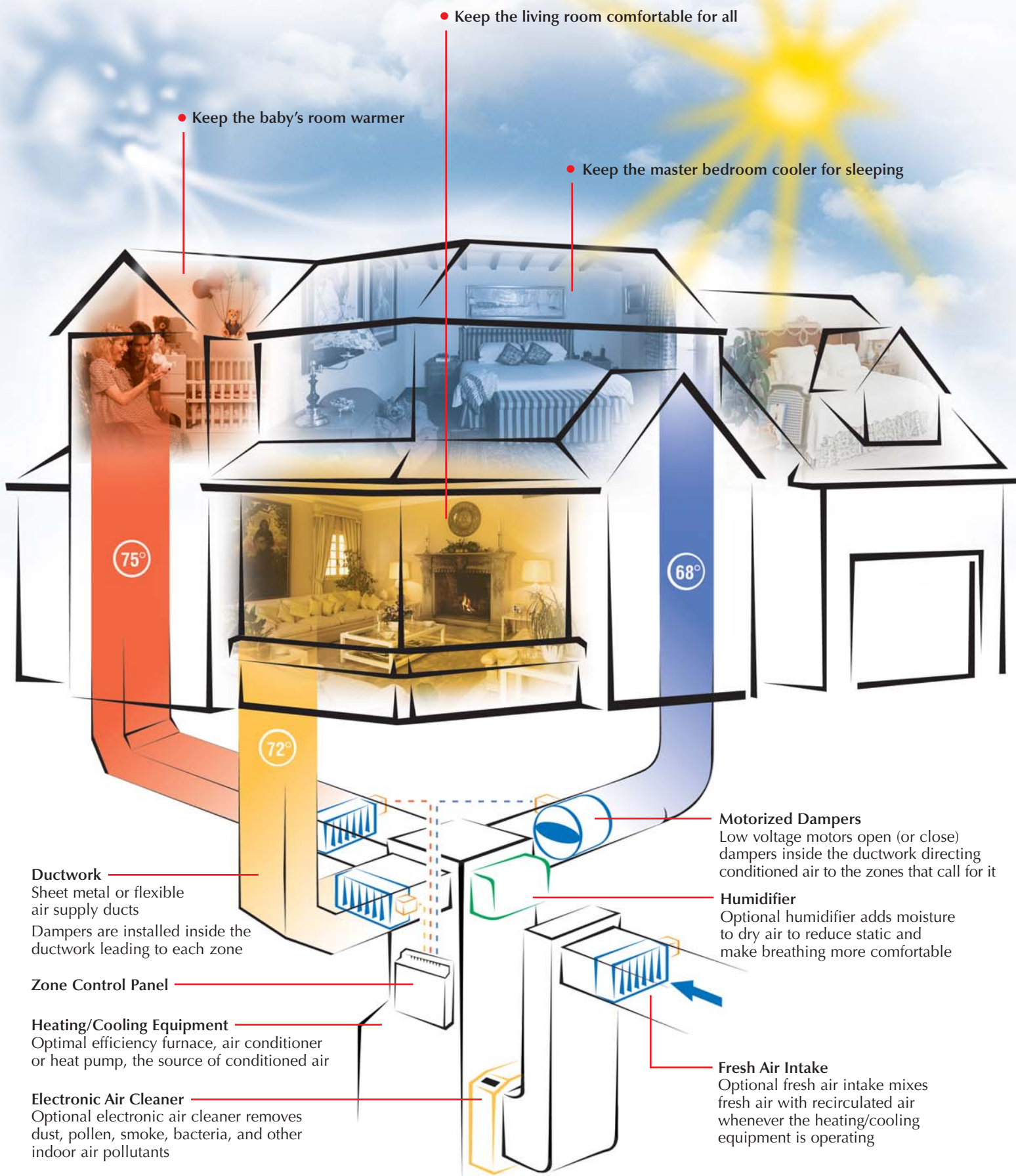
Common sense tells us that trying to control the lights in the entire house with one light switch is not practical or cost effective. Since heating and cooling costs are typically 50% to 75% of a monthly utility bill, it makes good sense to control temperatures as easily and effectively as we control our lighting. It's simply not possible for one thermostat to provide ideal comfort in every room. Zoning offers the easy, affordable, economical solution by dividing the house into areas with similar heating and cooling requirements. With each zone being controlled by its own thermostat, you get total comfort. Thermostat controlled motorized dampers control the flow of heating and cooling to each room from one central heating and cooling system.

By heating or cooling only those rooms you'll be using, you also conserve energy. In most homes today, one thermostat controls the temperature of the entire house. Rooms not in use are needlessly being heated or cooled, wasting energy and costing you money. The energy savings with controlled zones can be as much as 10%, 20%, and even 30% of your energy costs, resulting in hundreds of dollars in savings each year.

Zoning allows you to:

- Improve comfort by adjusting temperature for each room as you move through the house
- Conveniently adjust the temperature in one room without having to go to another part of the house to adjust the central thermostat
- Save energy by not overheating or cooling rooms that are unused or already at temperature
- Use any type of thermostat
- Add automatic setback thermostats and never touch the thermostat again
- Avoid having to use multiple HVAC units in order to provide zoning







ZONEFIRST™ offers a complete line of products and solutions to improve comfort, efficiency, and indoor air quality in any new or existing home with forced air heating and cooling.



Controlling Temperature Room to Room

55-57 Bushes Lane
Elmwood Park, NJ 07407-3204
201-794-8004 FAX: 201-794-1359
e-mail: info@zonefirst.com
www.zonefirst.com

©Copyright, Trolex Corporation, 2006, Rev. 3/06 Printed in USA

