VRV is a commercially applied heating and cooling system that distributes refrigerant, rather than water, to multiple fan coil units serving the conditioned spaces. The natural attributes of a VRV system position it as an alternative to a chiller system.

**The Features of VRV**
- Energy efficient, all systems incorporate inverter “variable speed” compressors
- Many zones (individual control - up to 41 zones on one piping network)
- Centralized system (long piping - up to 3,280 ft. total)
- Tight temperature control (Proportional Integral Derivative)
- Large capacity (modular systems combination)
- Quiet operation (down to 25dB(A) indoor)
- High level control (BACnet, LonWORKS, Intelligent Manager, Intelligent Touch Controller)
- Superior heating performance
- Absolute Comfort

**Why Refrigerant?**
The commonly used methods of heat transfer in air-conditioning solutions each exercise different operational characteristics regarding adding or removing heat energy to a conditioned space.

This diagram represents the energy transfer possible per pound of media due to the performance characteristic of the fluid used.

The use of refrigerant reduces installation space compared to other heat transfer methods.

**Why is VRV an efficient alternative?**
The heating and cooling system in a commercial building is used at 70% or less of its maximum capacity for 75% of the operational time.

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**VRV offers ease of design and installation**

### Complicated System

**Chilled water central plant layout with boiler**

**Simple System**

**Layout**

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**Superior heating performance**
- Absolute Comfort