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Energy Efficiency and Renewable Energy

High Performance Buildings Through Integration

Ken Hedrick

Bret P. Hunter

Chevron Energy Solutions

ChevronTexaco



Chevron Energy Solutions



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Integration

- **What is Integration?**



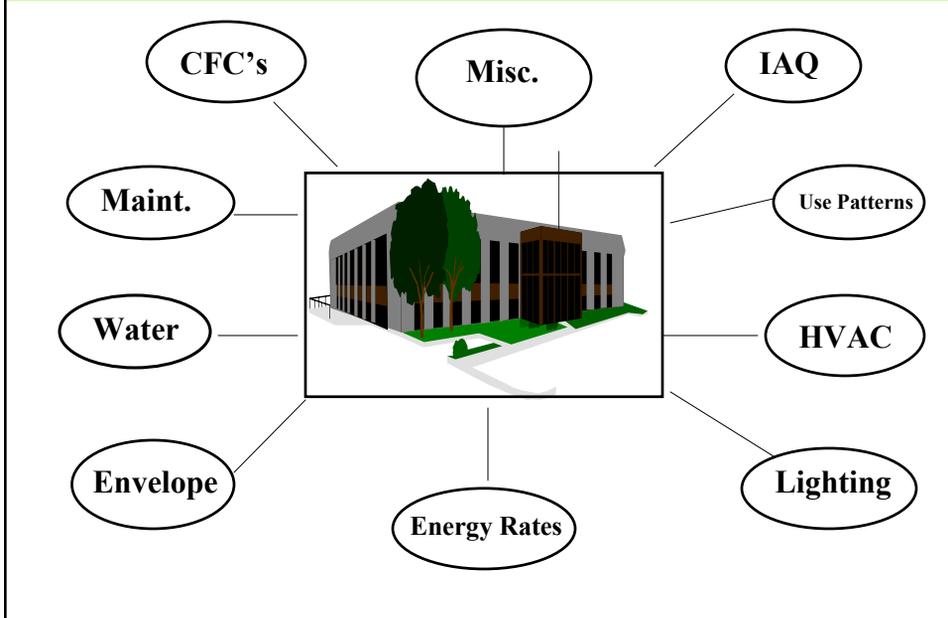
Definition

- **“To Make or Become Whole or Complete”**
- **“To Bring Parts Together Into a Whole”**



High Performance

- **What Is A High Performance Building?**



What Are The Benefits Of Building Integration

- Higher Efficiency
- Improved Comfort
- Reduced Operational Costs
- Longer Facility Life
- Others??????



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What Are The Barriers To Building Integration

- **Procurement Process**
- **Paradigms**
- **Executive Support**
- **We Have Always Done Things This Way**
- **Creative Thinking**



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Tools Available To Integrate For High Performance Buildings



L&M Growth vs Low Interest Rates

- **L&M Growth At An Average Rate of 2-4%**
- **Municipal Funding Sources As Low As 3%**

“It is cheaper and in your best interest to implement high performance building applications now than to put them off for later”



ESPC

- **Self Funded Solutions From Energy and Operational Budgets**
- **Guaranteed Results**
- **Customer Maintains Complete Control**
 - Pricing
 - Contractors
 - Equipment



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- **Example of High Performance Building Integration At It's Best**

University of Utah



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U of U Goals

- **Retrofit 90 Plus Buildings**
- **Leverage Capital**
- **Self Fund a \$23 Million Dollar Central Plant**
- **Not Have It Impact Future Bonding**
- **Have Happy Customers With End Result**









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Questions