

# CHARLES WAYNE FRAZELL, P.E., CEM

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## SUMMARY

Self-motivated, professional energy engineer with extensive experience in HVAC, energy conservation and customer relations. Resourceful team player with strong interpersonal, analytical and problem-solving skills. Proven ability to complete projects on schedule and within budget.

## PROFESSIONAL EXPERIENCE

### **Pritchard & Abbott Inc.** **2005-Present**

Conducted unit appraisals on various electric and telephone utilities as well as maintaining several computer models for appraising power plants and various coops. Provided technical assistance to field appraisers and testimony for contested rulings.

### **Texas Air Systems** **2003-2004**

Supported sales personnel by selecting commercial air-conditioning equipment to meet engineer requirements and assisting in putting together price proposals for specific projects.

### **Self Employed, Fort Worth, Texas** **2002-2003**

Provided energy consulting and information services to customers.

- Authored a paper for Lennox International showing the DOE proposed efficiency ruling for 5-20 ton air-conditioning units had an economic factor that was 10% too high.

### **TXU, Dallas, Texas** **1980 – 2002**

#### ***Senior Engineer – Energy Services, (June 2000 – August 2002)***

Analyzed energy use data and audited facilities to find energy saving opportunities which were presented to customers.

- Found more than \$500,000 in possible annual energy savings by conducting a comprehensive energy audit for an industrial customer.
- Co-authored MEASUREMENT OF ENERGY AND DEMAND SAVINGS, a new ASHRAE guideline book, a definitive work in energy conservation measurement.

#### ***Senior Engineer - Technical Services, (1992 - 2000)***

Provided energy consulting and information to sales representatives and customers.

- Consulted with customers to provide specific, easy-to-understand information about new energy conservation methods, which enabled them to achieve higher levels of operating efficiency.
- Analyzed and evaluated manufacturing processes for industrial customers utilizing process profitability study parameters, which provided solutions that led to improved efficiency and reduced production costs.

- Managed selection and negotiated purchase of audit software for residential and small commercial customers, resulting in accurate tracking of audit information and providing consistent reports to customers, while meeting PUC documenting guidelines.

***Staff Engineer - Conservation and Load Management, (1986 –1992)***

Provided technical assistance to marketing department and field organization for development and implementation of energy-related programs.

- Simulated energy use of commercial buildings prior to construction, by building a computer model to determine efficient operating costs and make recommendations prior to selecting HVAC technologies.
- Developed software to calculate heating and cooling requirements for residential and small commercial buildings to assist TXU field representatives in predicting energy operating costs, successfully resolving billing complaints and energy conservation issues.
- Developed, implemented and conducted training classes on audit software, heat gain/loss calculation, and thermal storage technology which improved TXU's ability to explain energy use to customers.

Junior Engineer – Transmission Design and Construction, (Prior to 1986)

- Designed and managed construction of electrical transmission facilities. Designed transmission lines to carry heavier electrical loads for areas needing additional capacity, allowing engineering department to meet an increased energy demand.
- Prepared cost estimates, ordered materials, wrote construction details and managed all aspects of new line construction to effectively serve new customer load.
- Coordinated the construction of new electrical substations and maintenance of electrical transmission facilities to serve the energy requirements of West Texas.

### **EDUCATION**

BSEE, Texas A&M, 1980

Specialized training in building simulation, ammonia refrigeration, technical writing, gas pipeline compression, compressed air systems, lighting basics & technology.

### **AWARDS & OTHER ACTIVITIES**

Edison Electric Institute, Marketing Achievement Award

Received two TXU, Marketing Appreciation Awards based on customer satisfaction

Society of Plastics Engineers, Appreciation Award

Presented three seminars at ASHRAE national meetings on energy rates

Reviewed papers for and worked on organization of ASHRAE semiannual technical programs

Amateur Radio operator and co-authored an article on a mobile HF antenna design

Guest speaker on Indoor Air Quality for TASBO and the National School Facilities Workshop

### **PROFESSIONAL AFFILIATIONS**

IEEE, ASHRAE

Registered Professional Engineer, Texas, Certified Energy Manager

### **COMPUTER SKILLS**

MS Word, Excel, PowerPoint, Access, Lotus 1-2-3, Lotus Notes, WordPerfect

ESPRE, micro-AXCESS, Hot Calc, System Analyzer, Windows 95, 98, XP, 2000, DOS, Internet