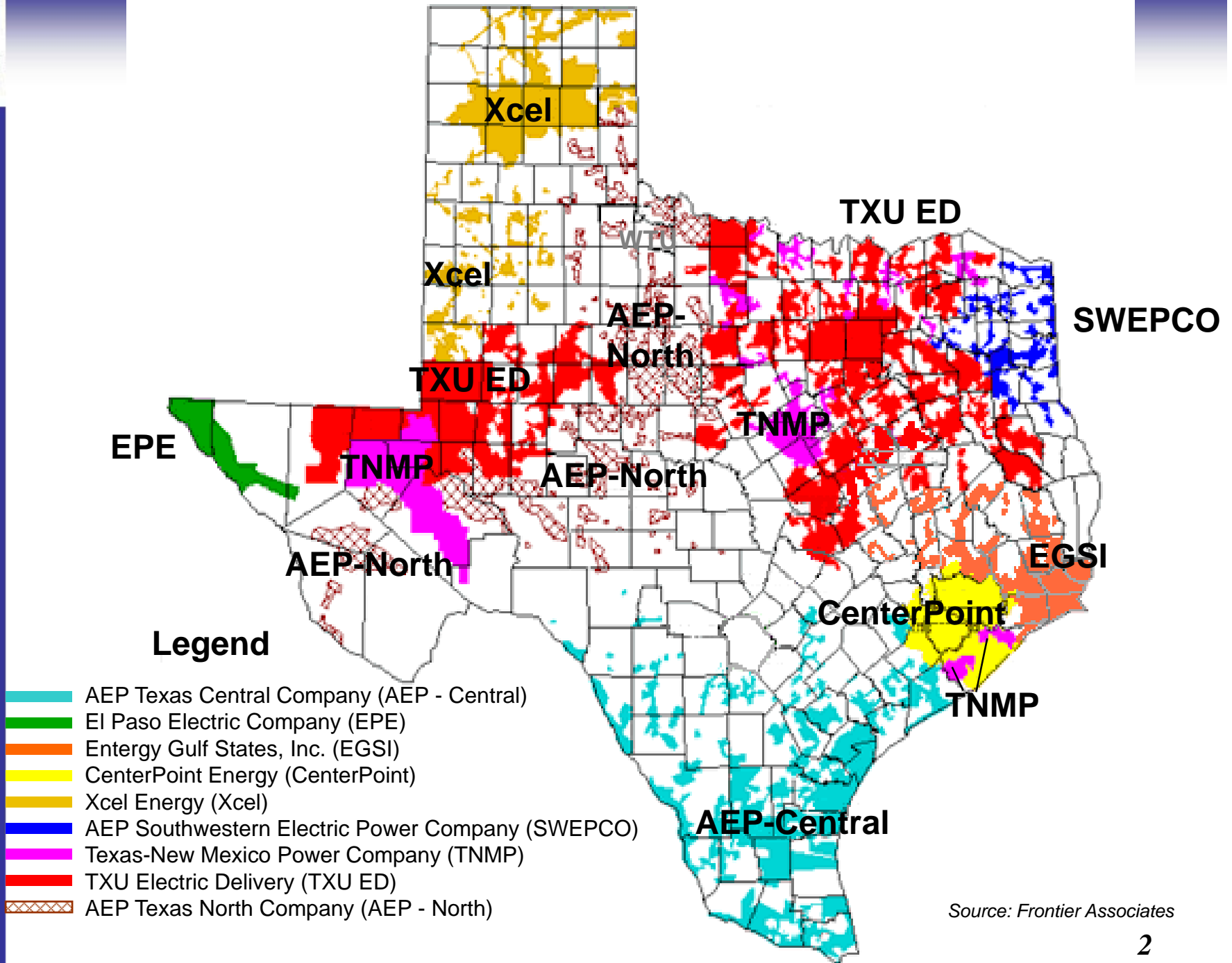


Designing and Running an Effective Portfolio of DSM Programs

Lessons Learned from Six Texas Utilities

*Stuart Schare,
Summit Blue Consulting*

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Texas Offers a Unique Case Study

DSM programs started from scratch in 2002

- **6 utilities**
- **9 program types**
- **1 common template for each program**

Goal for each utility:

- **>10% reduction in peak demand growth**

Secrets of Texas' Success...

- 1. Portfolio selection**
- 2. Program design**
- 3. Implementation**

...and topics for today.

1. Portfolio Design

Programs should target a mix of...

- Sectors
- Facility/home types
- End uses & equipment

Delivery methods

- Financial incentives
- Market transformation
- Customer services

Limitations

- Staffing
- Budget
- Time

Texas DSM Programs by Utility

- 31 unique programs
- All utilities ran 3 Standard Offer programs

| | AEP | CNP | Entergy | TXUED | TNMP | Xcel |
|---------------------------------------|-----|-----|---------|-------|------|------|
| Standard Offer Programs | | | | | | |
| Residential & Small Comm. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Hard to Reach | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Commercial & Industrial | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Load Management | | | | ✓ | | |
| Market Transformation Programs | | | | | | |
| ENERGY STAR New Homes | | ✓ | ✓ | ✓ | ✓ | |
| AC Distributor | | ✓ | ✓ | ✓ | | ✓ |
| AC Information & Training | | | | ✓ | | |
| Multi-Family Water & Space Heating | | ✓ | | ✓ | | |
| Retro-Commissioning | | ✓ | | | | |

2. Program Design

Common program template used by each utility

- **Program Overview**

- Description
- Rationale
- Objectives

- **Pricing/Incentives**

- **Eligibility**

- Participant
- Project
- Measure

- **Program Promotion**

- **Program Process**

- Application
- Installation
- Payment

- **M&V**

- Purpose
- Responsibility
- Procedures

Figure: 16 TAC §25.184(c)(11)

RESIDENTIAL AND SMALL COMMERCIAL STANDARD OFFER PROGRAM

Program Overview

Description

The Residential and Small Commercial Standard Offer Program provides incentives for the installation of a wide range of measures that reduce customer energy costs, and reduce peak demand and/or save energy for residential and/or small commercial customers. Incentives are paid to energy efficiency service providers (EESPs) on the basis of deemed savings, which are standardized savings values or formulas for a wide range of measures in representative building types. If deemed savings have not been established for a particular qualifying energy efficiency measure, then incentives may be paid on the basis of verified peak demand and/or energy savings using the International Performance Measurement and Verification Protocol (IPMVP). Small commercial customers are retail non-residential customers with a maximum demand that does not exceed 100 kW. This program has been developed to comply with P.U.C. SUBST. R. 25.181, relating to the Energy Efficiency Goal, implementing §39.905 of the Public Utility Regulatory Act (PURA).

Rationale

This program seeks to encourage market activity by EESPs that install a wide range of energy efficiency measures in residential and/or small commercial establishments. The EESP is responsible for aggregating the energy and/or peak demand reductions achieved in households and/or small commercial facilities that receive the energy efficiency services in order to meet the minimum project size established by the utility (program administrator).

Program Objectives

The primary objective of this program is to achieve cost-effective reduction in energy consumption during peak summer demand. Additional objectives of the program are to:

- Encourage private sector delivery of energy efficiency products and services.
- Achieve customer energy and cost savings.

Participant Incentives \$\$\$

- \$ awarded for kW savings
- Capped at avoided cost of generation
 - 100% for hard-to-reach customers
 - 50% other residential and small commercial
 - 33% for large C&I
 - 25% for load management (demand response)
- Caps ensure cost-effectiveness
- “Ratchet down” incentives
- Incentives for lighting capped at 65% of total

Eligibility Requirements (Residential and C&I SOP)

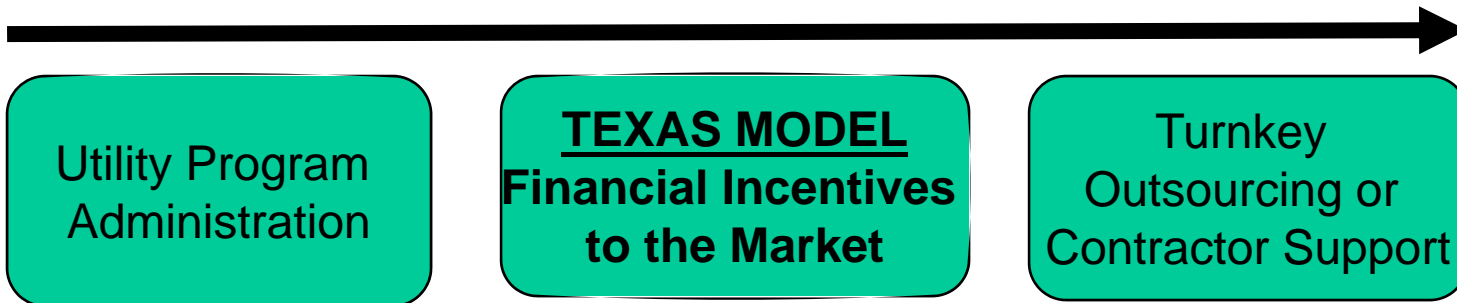
- **Participants**
 - “Energy efficiency service providers” sponsor projects
 - Customers are **not** the participants
- **Projects**
 - Low-income thresholds
 - C&I projects must reduce >20 kW
- **Measures**
 - Eligible residential measures have deemed savings
 - C&I measures must exceed Commission standards
 - 10-year minimum lifetime
 - No plug loads or “behavior” measures

3. Program Implementation

- **Program Promotion**
- **Program Process**
 - Application
 - Installation
 - Program records/database
 - Payment
- **M&V**
 - Purpose
 - Responsibility
 - Procedures

Program Promotion & Marketing

- Texas has a middle ground between
1) Utility-run programs and 2) Outsourcing



- **Utilities**
 - DO NOT market programs
 - Role is to educate contractors (project sponsors)
- Texas is building an Energy Services infrastructure
 - Contractors seek customers to get incentives
 - Increased business and profits for contractors
 - EE costs are lowered for customers

Application, Incentive\$, and Records (Program Administration)

- **Contractors reserve funds for anticipated projects**
 - Provides long-term business assurance
 - Incentives assured for existing projects
- **Sloths need not apply!**
 - Incentive allocation not equitable
 - Does not work if programs are oversubscribed
 - Alternative: reserve only for identified projects
- **Program databases**
 - All-electronic applications and project filing
 - Deemed savings & incentives tracked automatically
 - For invoicing and reporting

Measurement & Verification

- **Inspections**
 - Utility staff conducts inspections
 - Level of effort varies by program
 - Residential SOP – random sample for each contractor
 - C&I SOP – all projects inspected
- **Guidelines for adjusting savings (and payments!)**
- **Independent verification**
 - 3rd party “desk” audit only
 - Statewide impact and process evaluation

Key Findings of Process Review

Program Planning

- Higher goals (>10% of growth)
- “Peak Demand Savings” at system peak only
- Promotion of multiple measures at individual sites
- Variable incentives (\$/kW) based on measure type
- Continued reduction of incentives for popular measures
- Programs can't remain static (e.g., A/C standards)

Program Delivery

- Equitable access to financial incentives
- Limits on \$ to ensure desired mix of sponsors & measures
- Year-round funding to increase sponsors' financial stability
- Error checks in program dBs
- 3rd-party independent inspections
- Improved recording of inspection results / documentation



Iron Program Administration



- 1 “theme” ingredient per episode
- 1 hour to prepare the dish
- Required ground rules
- 1 target end-use/sector per program
- 1 year to achieve annual goals
- Texas PUC program templates

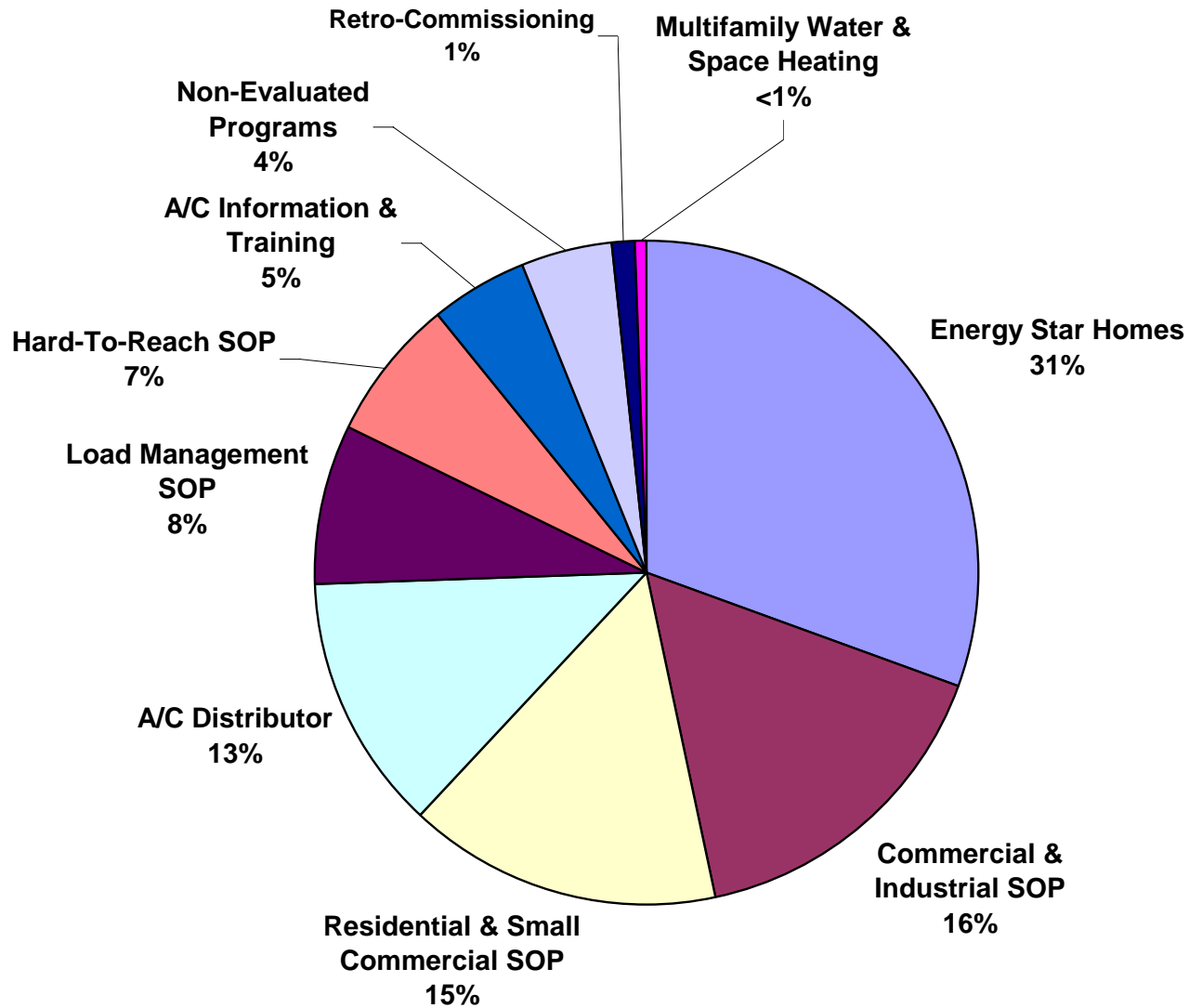
Objective

Make the best dish possible without spending too much on the ingredients

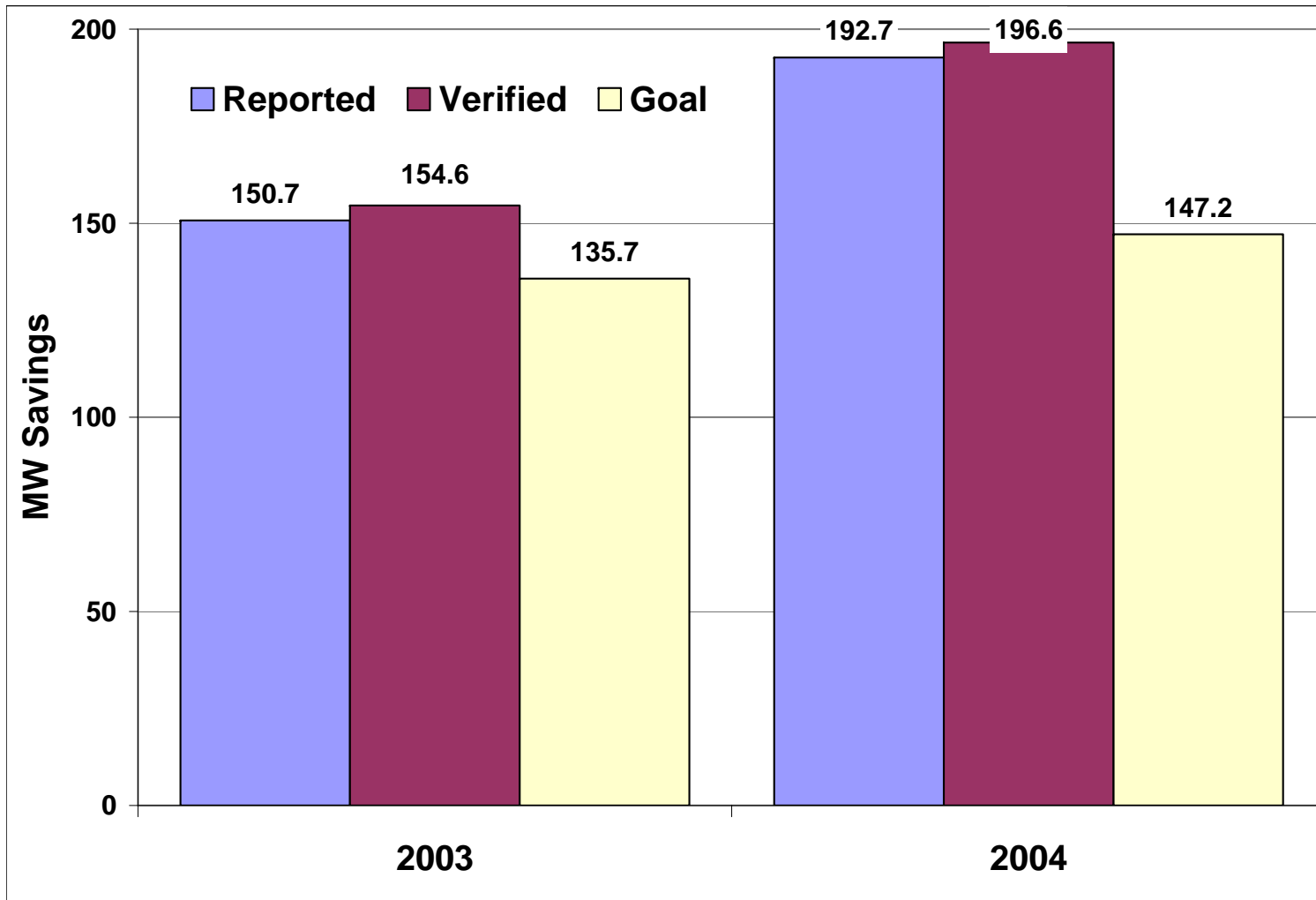
Objective

Run the best program possible with a 10% admin budget

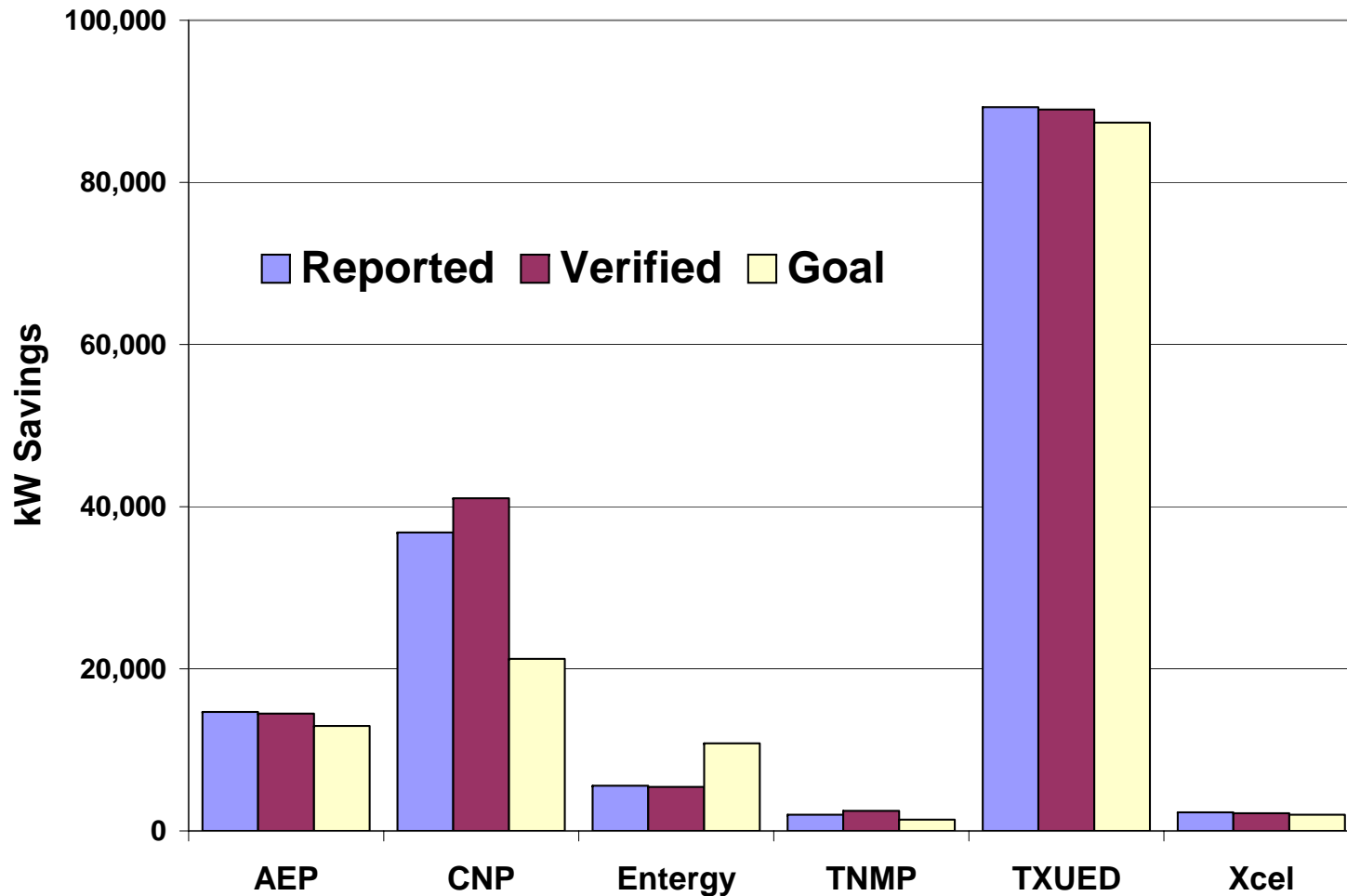
Verified Peak Demand Savings (kW) by Program, 2004



Texas Utilities Exceeded Energy Savings Goals in 2003 and 2004



Demand Savings and Goal Achievements by Utility, 2003





Stuart Schare

Summit Blue Consulting

(720) 564-1130

sschare@summitblue.com

www.summitblue.com