Proposal for

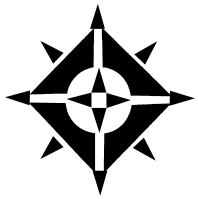
Consulting Services to Analyze Cornwall Edison's Options for Implementing Demand-Side Management (DSM) Programs

Submitted by

Compass Energy Research Associates

1800 South Bend Road
Littleton, Colorado 80127
(720) 922-9077

July 25, 2011



CONTENTS

© 2011 Compass Energy Research Associates

1.0 Introduction

Cornwall Edison (CE) is a rural cooperative utility located in the southeastern United States. CE provides electricity to about 12,000 industrial, commercial and residential customers. The utility's primary power-generation resource is a single hydroelectric plant stationed near the Cornwall Dam. Historically, this plant has had ample capacity to meet customer demand.

Recently, however, the area has attracted an unusually high number of new businesses through favorable tax incentives. The relocation of several large companies to the Cornwall area has greatly improved the local economy, providing jobs, stimulating property values and spurring new residential and commercial construction. This influx of new companies and personnel has simultaneously resulted in a dramatic spike in peak-time energy consumption, particularly during the sweltering summer months.

An exhaustive study revealed that CE's power infrastructure is currently adequate to meet expected aggregate demand, but is **potentially inadequate** to meet forecasted peak demand, forcing the utility to explore investment in reserve power-generation sources. In order to keep this investment as low as possible, the study recommended CE take immediate steps to reduce peak-demand spikes through demand-side energy management (DSM) programs. Cornwall Edison issued a Request for Proposal (RFP) to analyze peak consumer demand and recommend short-term and long-term DSM strategies that have proven to reliably shave peak-demand loads for customer bases with similar consumption behaviors and demographics.

CE has invested in a small number smart-grid technology devices to begin monitoring electrical usage, but this equipment has been limited to new construction. The RFP requires that the proposed analysis include recommendations for increasing smart-grid installations to provide the requisite technology base for state-of-the-art DSM initiatives. CE stakeholders have the goal of implementing DSM programs that will achieve two important objectives:

a) Reduce peak demand and thereby reduce investment in reserve power-generation sources
b) Improve CE's ability to predict, monitor and manage demand, in order to facilitate making effective and efficient decisions regarding reserve capacity options

Additionally, because CE is a cooperative utility, management is concerned about educating and motivating customers to become proactive managers of their power consumption as a way of preserving goodwill and keeping customer satisfaction as high as possible. CE stakeholders recognize that they are entering the DSM environment somewhat late compared to other comparably-sized power companies. It is expected that the winning consulting proposal will draw upon knowledge acquired by similar utility providers to help CE avoid expensive mistakes.

© 2011 Compass Energy Research Associates

2.0 Statement of Work

Compass Energy Research Associates (CERA) will provide Cornwall Edison (CE) with research and consulting services to:

1. Identify industrial, commercial and residential aggregate and peak-demand consumption patterns and associated demographic characteristics to provide an in-depth, comprehensive analysis of CE's customer base.

2. Research utilities with similar customer profiles and analyze their DSM program results to recommend suitable DSM strategies for CE. DSM programs under consideration include, but are not limited to:

    - Automated demand response
    - Financial incentive demand response
    - Load response
    - Price response
    - On-site co-generation

3. Provide in-depth cost/benefit analysis for each proposed DSM program that includes specific estimates of peak-demand load shaving and aggregate load reallocation.

4. Research pricing strategies used by similar-size utilities that resulted in desirable load-shifting patterns by consumers and make recommendations to CE for implementing new pricing strategies. Strategies to be studied include, but are not limited to:

    - Time-of-use rates
    - Power-factor charges
    - Real-time pricing

4. Recommend customer education and incentive programs that have a track record of success with similar user profiles, especially with regard to maintaining a high level of customer satisfaction and goodwill.

5. Outline resources, suppliers, timelines, milestones and procedures for implementing specific DSM programs.

2.1 Process Flow

Figure 2-1 illustrates the proposed process flow for achieving the objectives outlined in the statement of work. The project will be organized into three phases.

© 2011 Compass Energy Research Associates

2.1 Process Flow (continued)

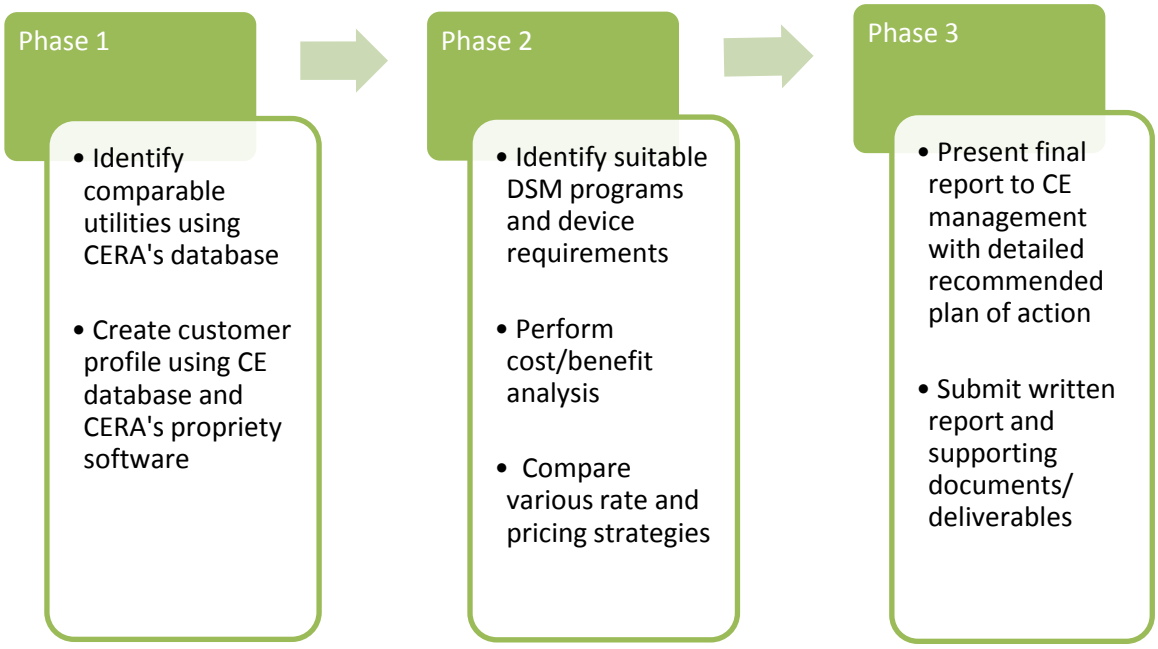


Figure 2.1 Proposed Process Flow

2.2 Scope and Methodologies

Compass Energy Research Associates (CERA) is noted for its global database of energy providers. This database will provide the starting point for identifying utilities whose size, consumption characteristics, demographics and power resources are similar to Cornwall Edison's. The scope shall be limited to electric utility providers located within the United States.

Historically, DSM programs have been more successful in markets that exhibit price sensitivity, or what is considered "elastic" demand. In this case, demand typically decreases as the price for power increases. Accurately assessing demand elasticity is critical in successfully implementing DSM programs that are tied to rate fluctuations. The level of elasticity varies among power markets due to a variety of factors.

Once comparable utilities have been selected and verified, CERA's project team will conduct a detailed survey to determine what DSM programs have been implemented by these organizations. Results will be analyzed according to several different criteria.

© 2011 Compass Energy Research Associates