

**THE EFFECT OF CONSERVATION AND CUSTOMER GROWTH  
ON DESIGN DAY DEMAND**

**By**

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## **Starting Point for Forecasting Peak Day Demand:**

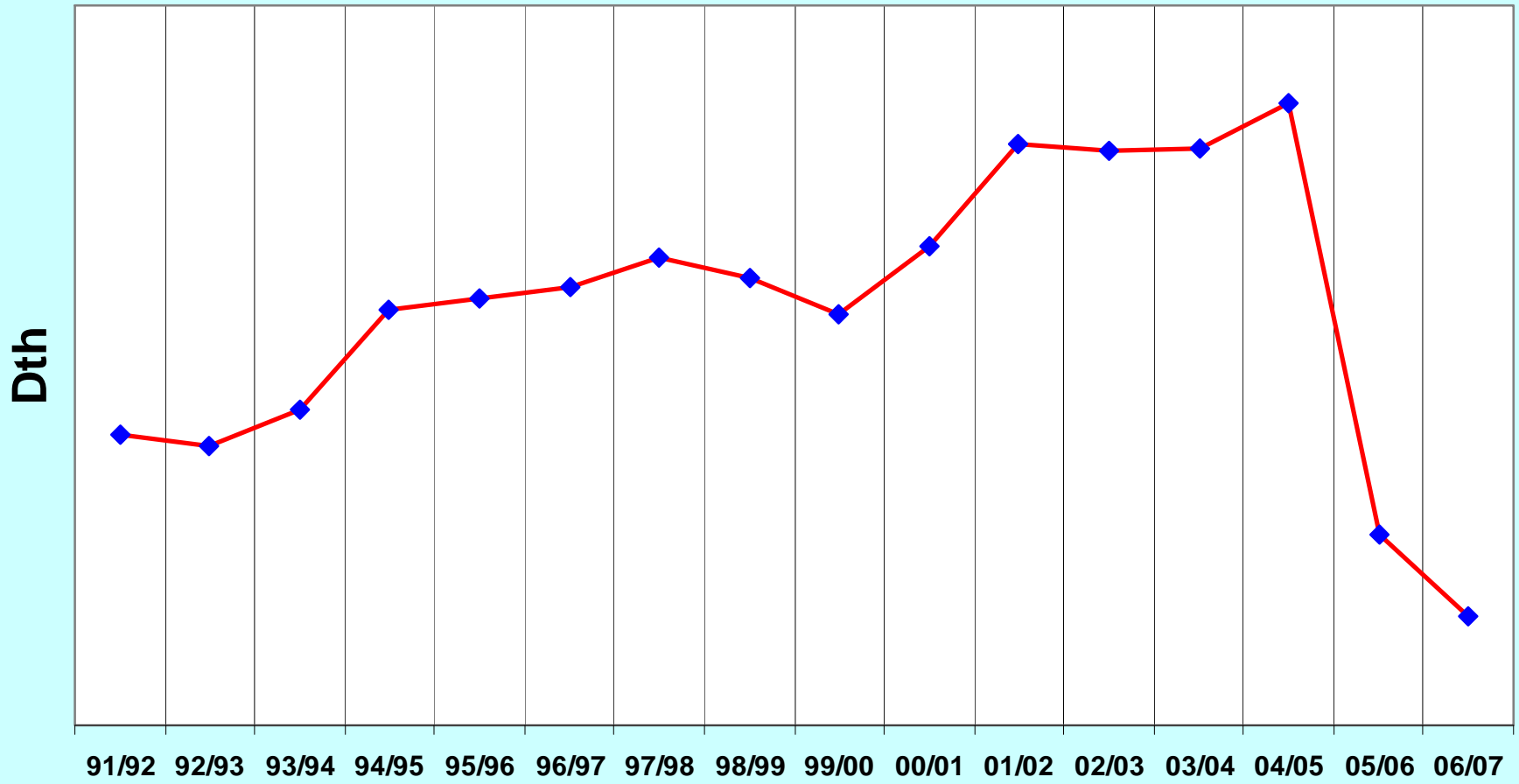
### **THE DESIGN ACTUAL**

**The “Design Actual” is what the peak day demand would equate to if design conditions had occurred during the applicable winter. It is our basis (starting point for Year 0 Demand) in developing a forecast.**

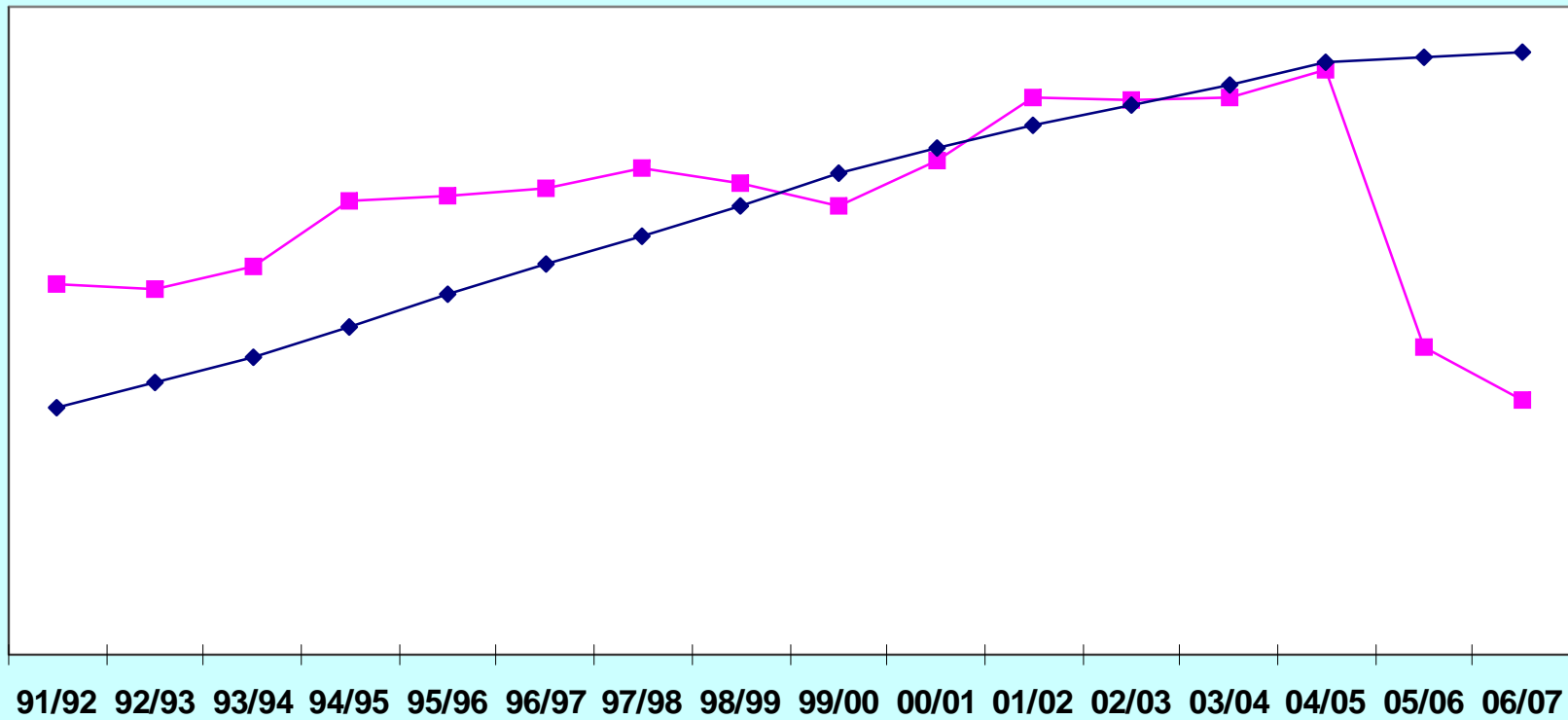
## **Design Actuals Based On:**

- 1. Regressions of observed data for coldest months of winter heating season**
- 2. Design weather conditions analyzed: current day temperature, prior day temperature, and wind speed**
- 3. Regression coefficients (design conditions plus weekend/holiday effect)**
- 4. All days or subset of days within the winter**

### Design Actual Firm Demand



## Design Actual Firm Demand Compared to The Total Number of January Firm Demand Customers



—■— Firm Design Actual —◆— Total No. of Firm Demand Customers

## **Is Enough Intelligence Available To Provide An Accurate Assessment Of Customer Conservation in Gas Use?**

### Types Of Data Needed:

- 1 – Installation of more efficient equipment in existing homes**
- 2 - Addition of new customers in fuel-efficient homes and house size**
- 3 – Do trends seen in monthly/seasonal usage translate one-for-one on peak day**
- 4 - Effects of higher prices**
- 5 - Effects of “seasonal” weather**
- 6 – Sufficient experience of colder temperatures**

# **Additional Sensitivity Analysis**

**Correlation of Demand at Colder Temperatures to:**

**Weather**

- current day**
- prior day(s)**

**Burner Tip Price of Gas**

**Number and type of customers being served**

## **Conclusion**

**New and/or different approaches must be considered to successfully forecast an elusive demand pattern in years to come.**