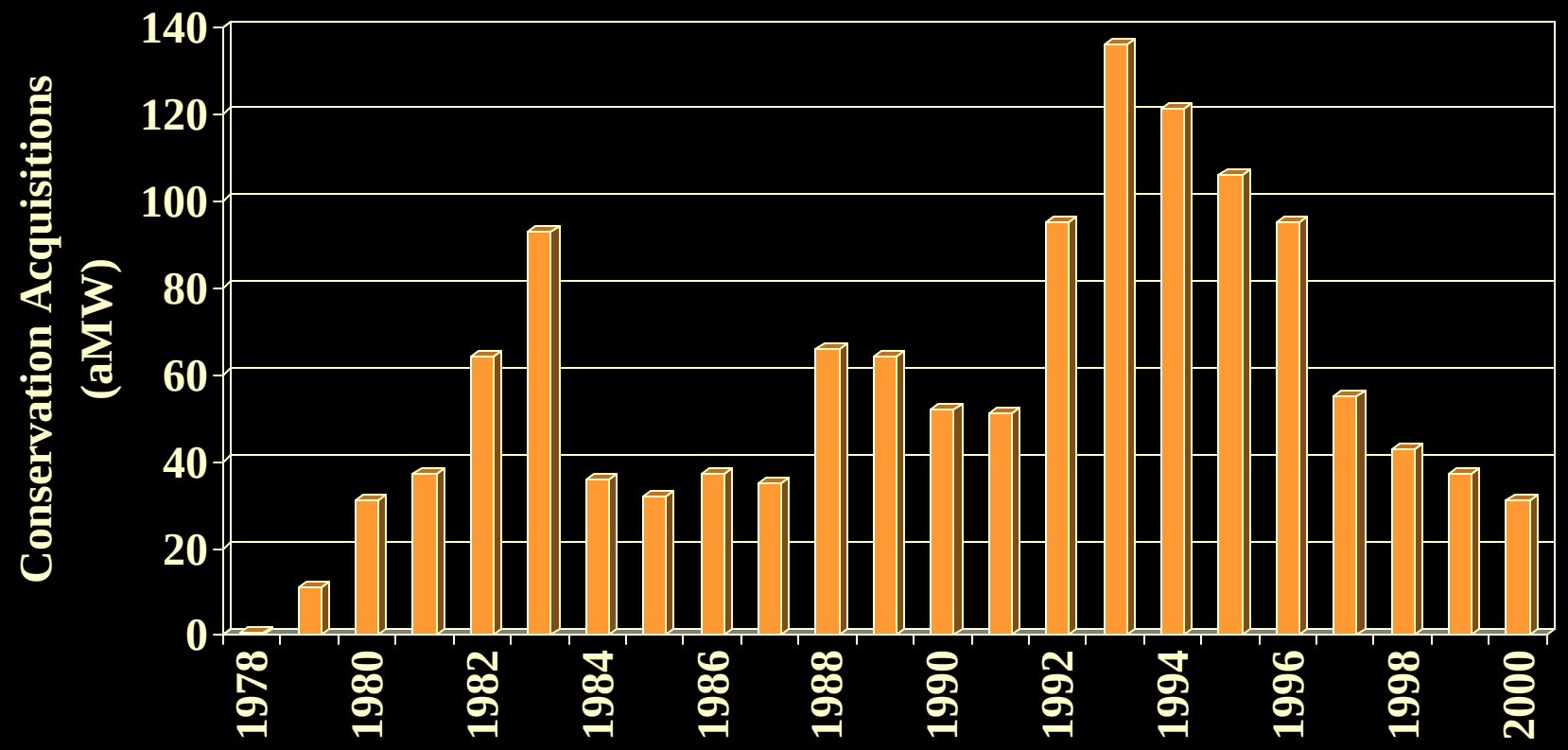
Economic Value of Stabilizing Regional Conservation Investments

Issues and Proposed Analytical Approach

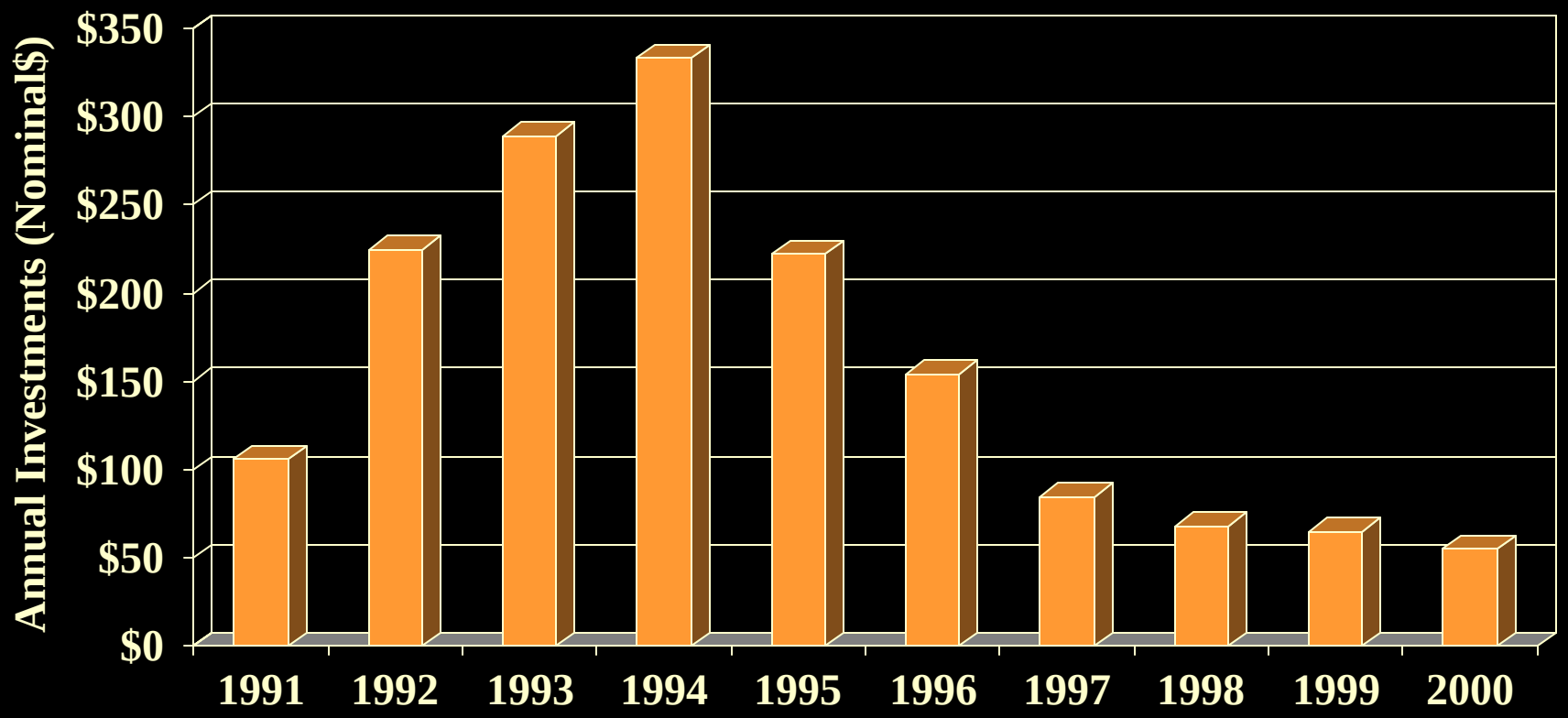
Goal of the Analysis

- Determine whether there is a net economic value to the region's power system that could result from stabilizing the annual level of conservation resource acquisition
- Identify and evaluate conservation deployment strategies that provide the best net economic value to the regional power system considering practical limitations on program ramp rates and market volatility

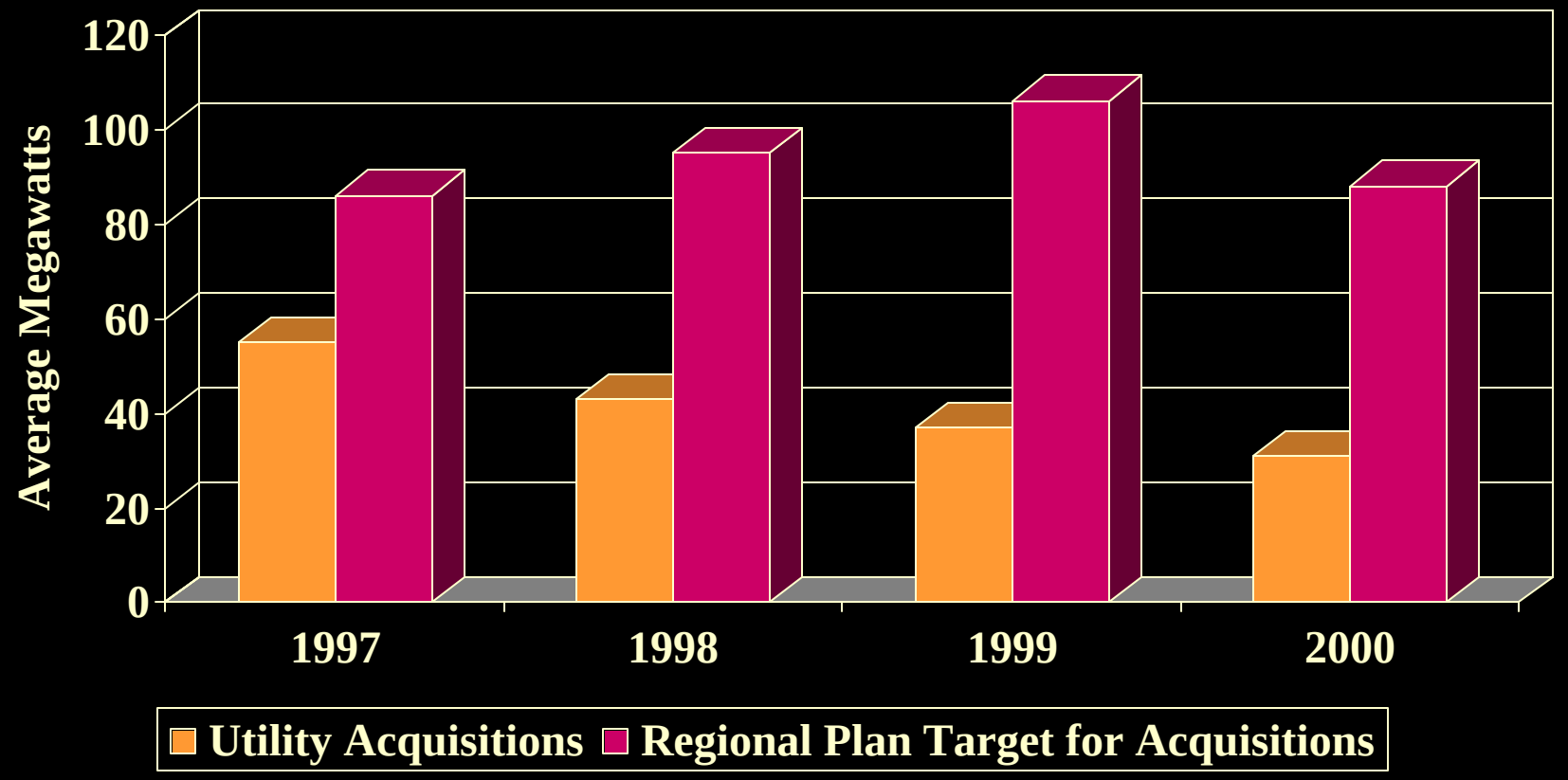
Regional Utility Program Conservation Acquisitions 1978 - 2000



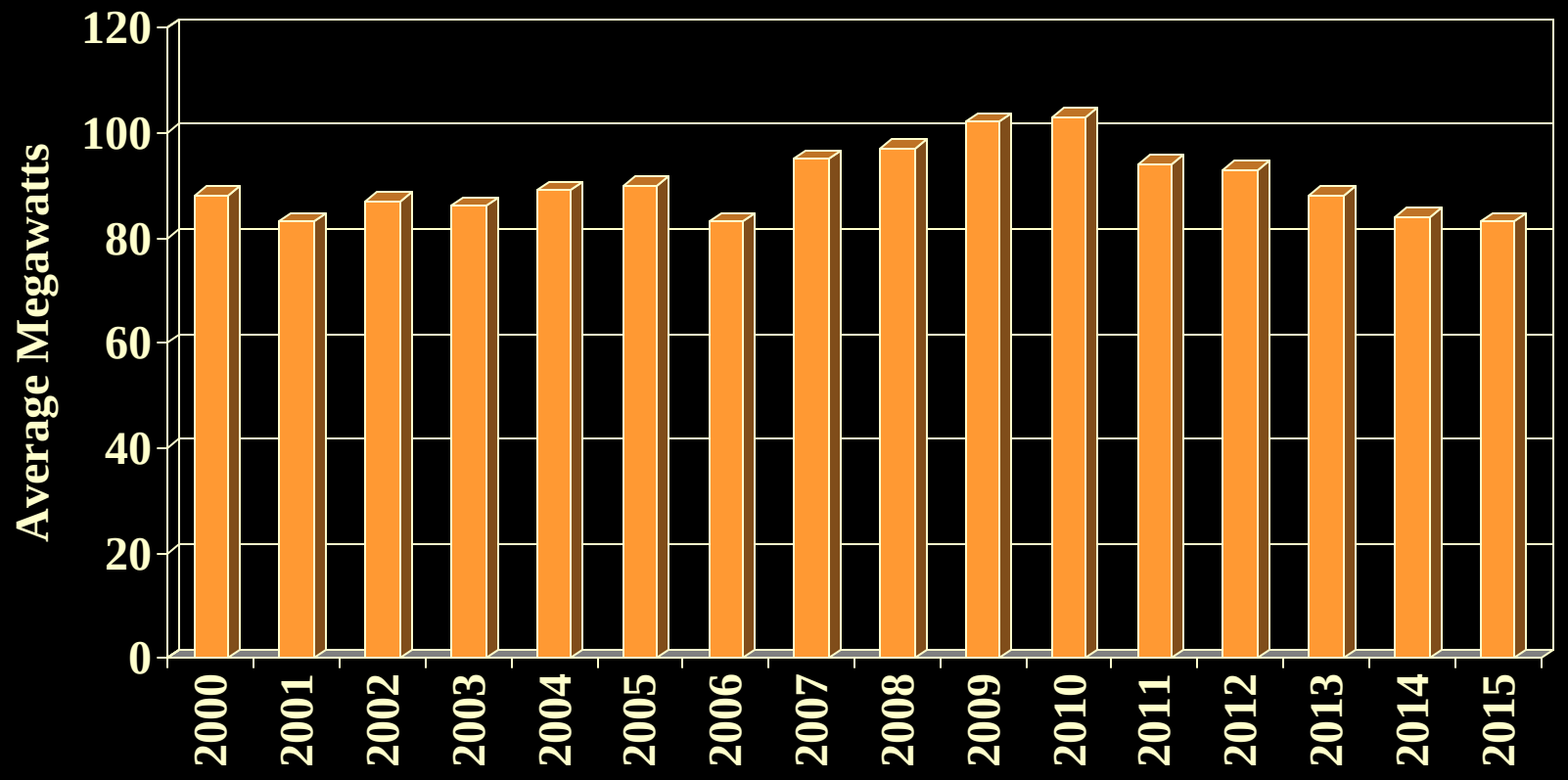
Regional Utility Conservation Resource Acquisition Investments 1991 - 2000



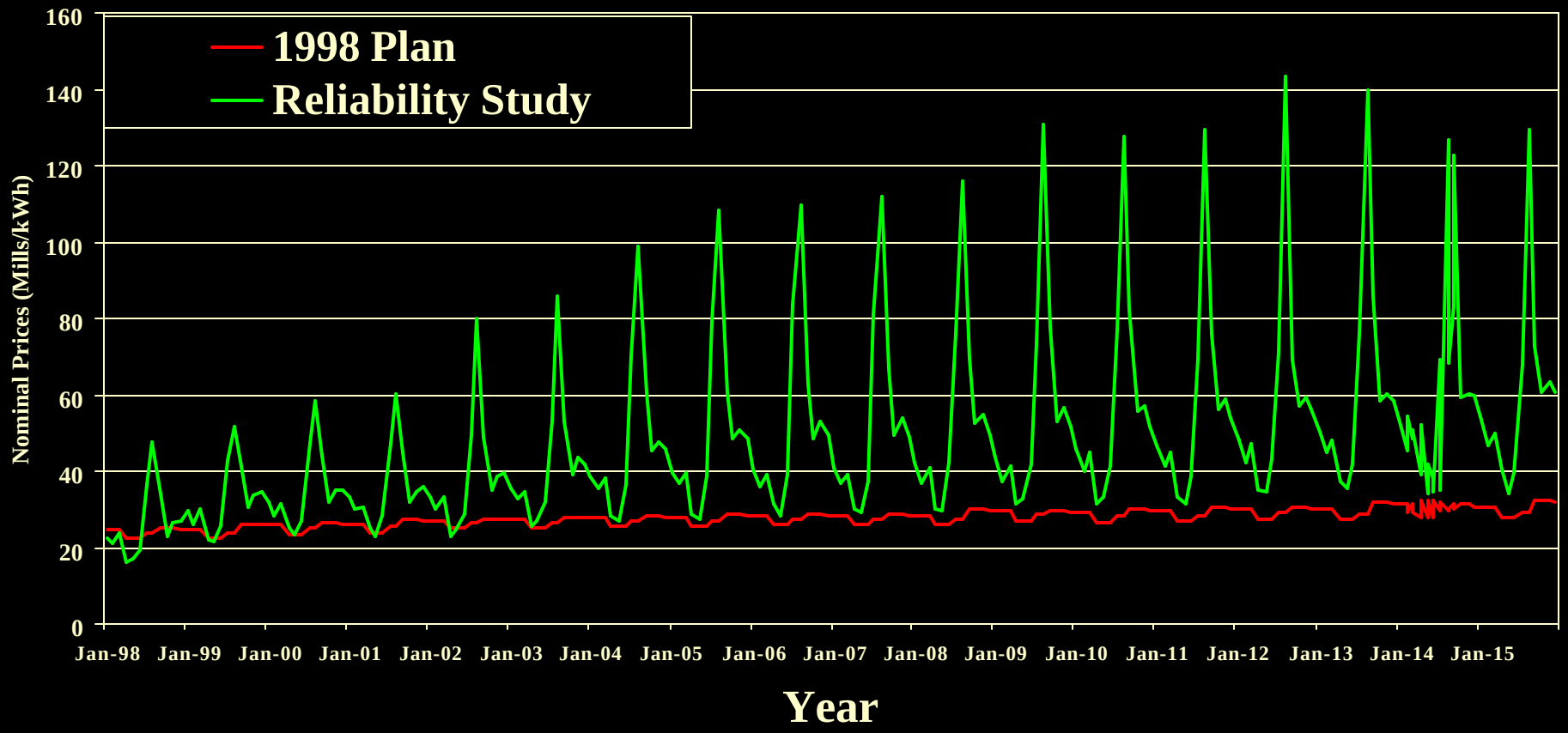
Regional Utility Conservation Acquisitions vs. Council Plan Targets 1997 - 2000



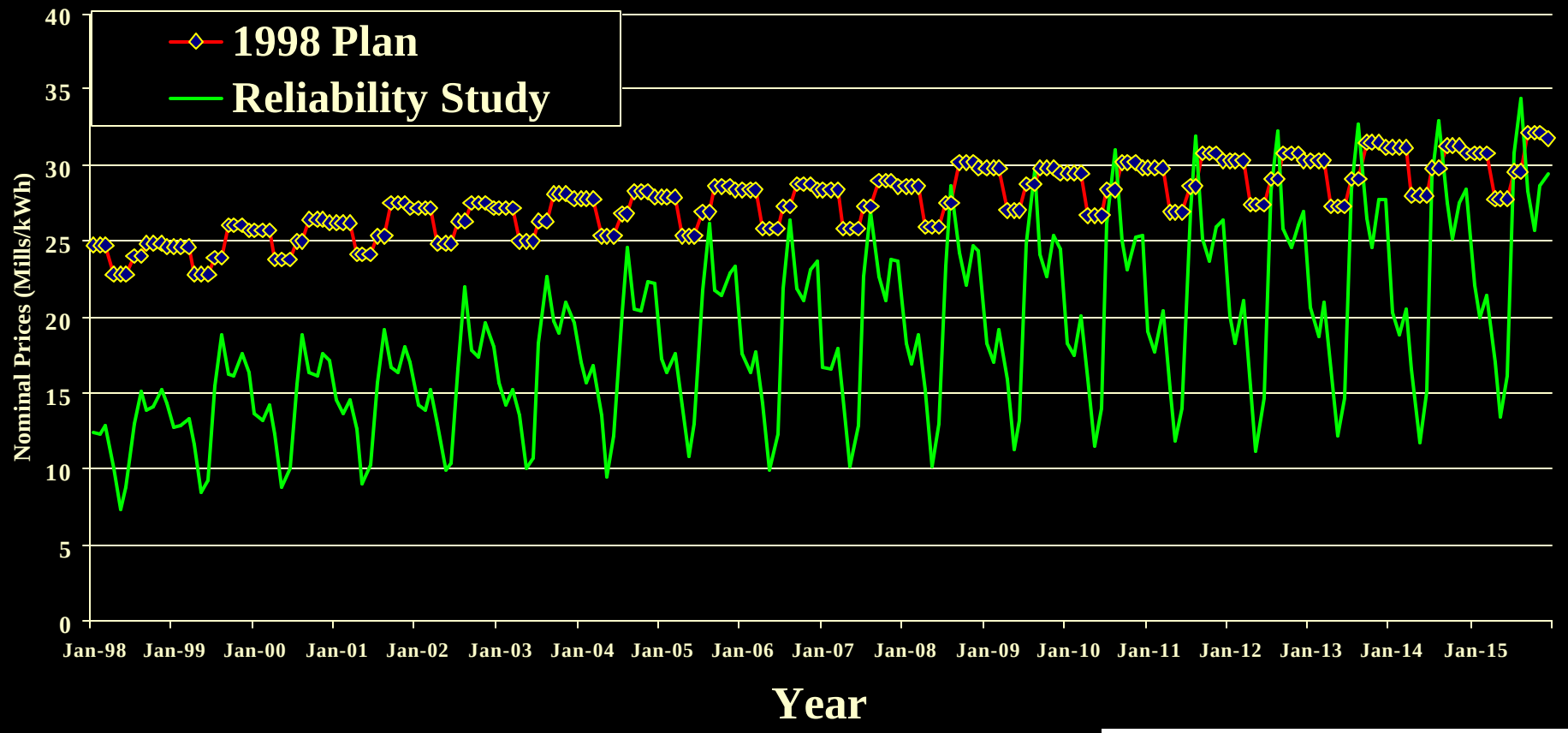
Fourth Power Plan's Conservation Acquisition Schedule 2000 - 2015



On Peak Wholesale Price Forecasts



Off Peak Wholesale Price Forecasts



Summary of Problem

- Past Plans have called for stable annual regional conservation acquisitions
- Utility investments in conservation have varied widely in response to industry and regulatory conditions
- Question –How does the cyclic investment in conservation impact its economic value to the region?

Possible Analytical Approaches

- Use GENSYS to compare the "net present value system cost" of two alternative conservation acquisition scenarios
  - Stable annual conservation acquisitions
  - Conservation acquisitions matched to near term market and regulatory conditions

(Use historical acquisition "pattern" to represent "market responsive" scenario?)

Possible Analytical Approaches

- Use AURORA to model a “Prototypical” conservation plant that is deployed in uniform annual increments based on long-run avoided costs
- Match the “prototypical conservation plant’s” cost to short-term market prices to determine the cost-effectiveness limit for “stable” conservation acquisitions