

Indiana-Michigan Power Company

February 09

What & Whom

What do we Forecast?

- Energy Sales (MWh)
- Non-Fuel Revenues
- Customer Count
- Peak Load (MW)

For Whom?

- 16 Jurisdictions
- 11 Companies
- 11 States

When Do We Forecast?

Weekly (During Peak Seasons)

- Energy Sales (MWh)
- Peak (MW)

Forecast Horizon

Hourly, 1 Week Out

Monthly (Board Estimate System)

- Energy Sales (MWh)
- Non-fuel Revenues (\$)
- Customer Count
- Peak load (MW)

Balance of Month

Quarterly (Earnings Guidance)

- Energy Sales (MWh)
- Non-fuel Revenues (\$)
- Customer Count

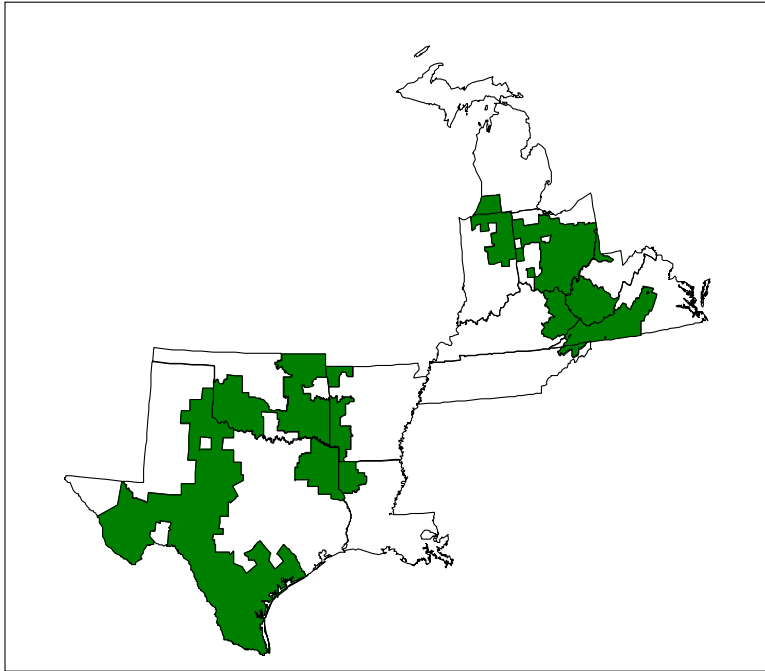
18 Months

Bi-Annually (IRP & Budget)

- Energy Sales (MWh)
- Non-fuel Revenues (\$)
- Customer Count
- Peak load (MW)

20+ Years

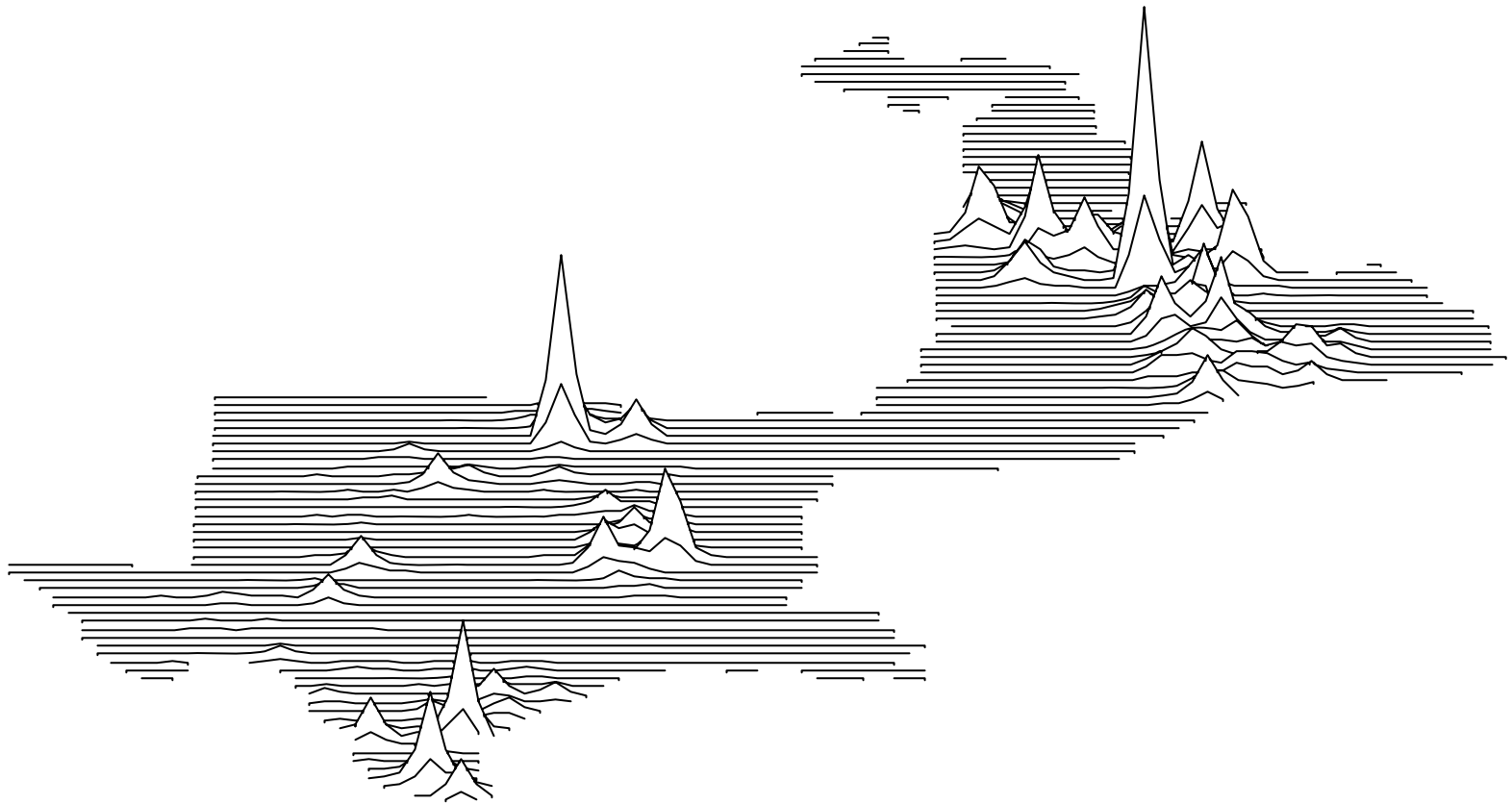
AEP Service Territory



AEP territory covers parts of 2 time zones, 11 states, and 334 geographic entities (counties, parishes, and cities not considered part of any county) from the Great Lakes to the Gulf of Mexico.

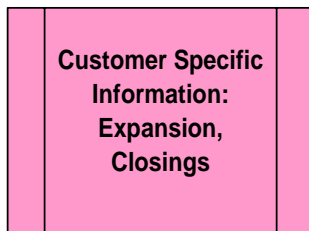
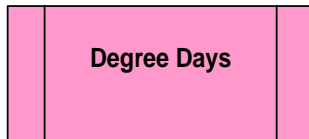
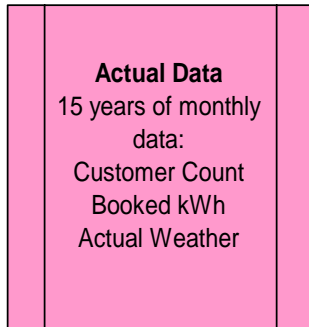
If AEP was a state, it would be the 3rd largest in land area, behind only Alaska and Texas, ahead of California. If AEP was a state, it would rank 5th in population, behind Florida, and ahead of Illinois.

2007 kWh to Ultimate Customers

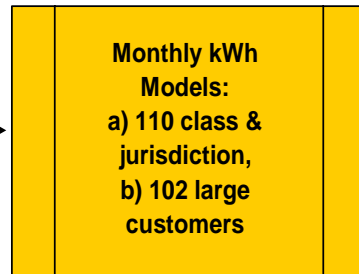


Short Term Load Forecast Methodology

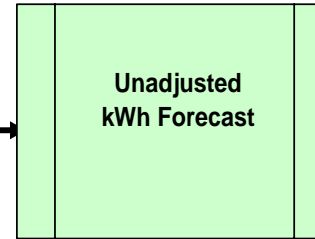
1. Input Data



2. Estimate Models



3. Model Forecast



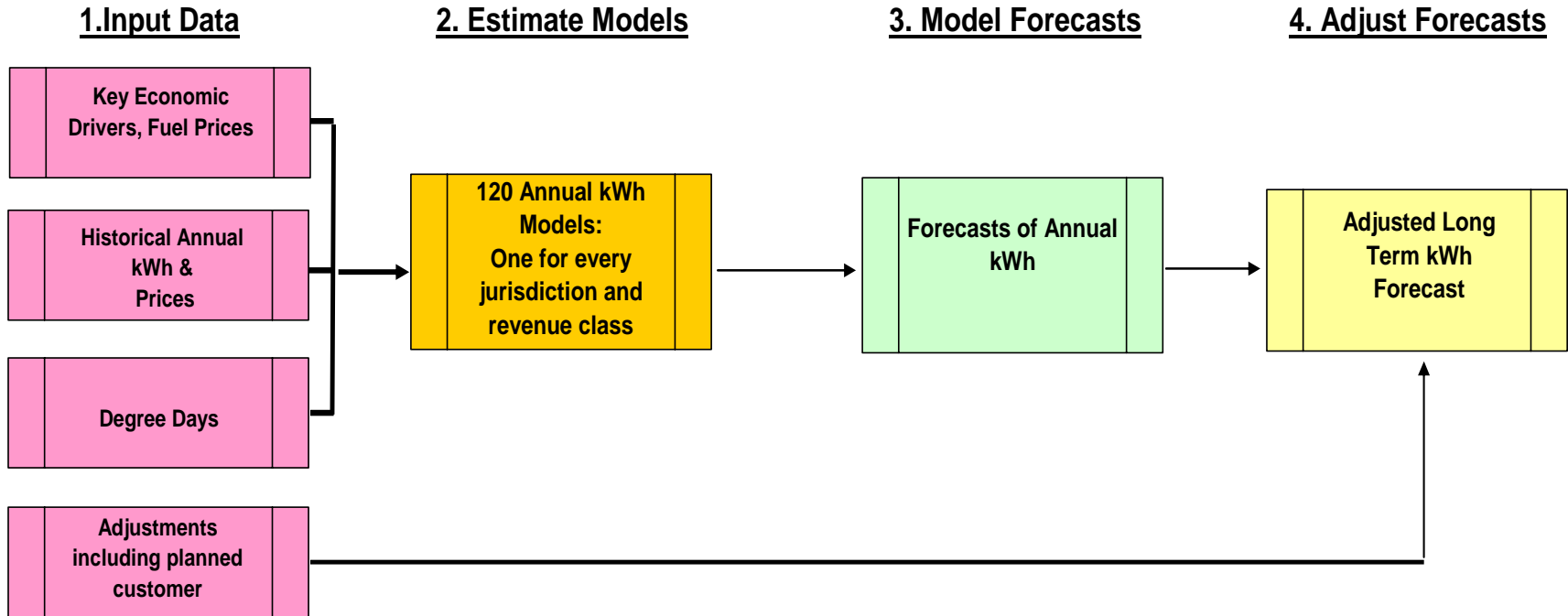
4. Adjusted Forecast



Key Explanatory Drivers:

- >Cooling Degree Days
- >Heating Degree Days
- >Customer Specific Drivers
- >Past values of customer count, usage per customer, or total kWh

Long Term Load Forecast Methodology



Key Industries	
<u>AEP-East</u>	<u>AEP-West</u>
Coal Mining	Petroleum
Primary Metals	Paper
Chemicals	Chemicals
Motor Vehicles and Parts	Oil and Gas Extraction
Rubber and Plastics	Industrial Machinery

Economics and AEP's Forecast

AEP purchases an economic forecast from Moody's Economy.com. It consists of county-level data for employment, income, and output. The counties are aggregated to the jurisdiction, state, power pool, and total company level.

These aggregations serve as an approximation of AEP service territory.

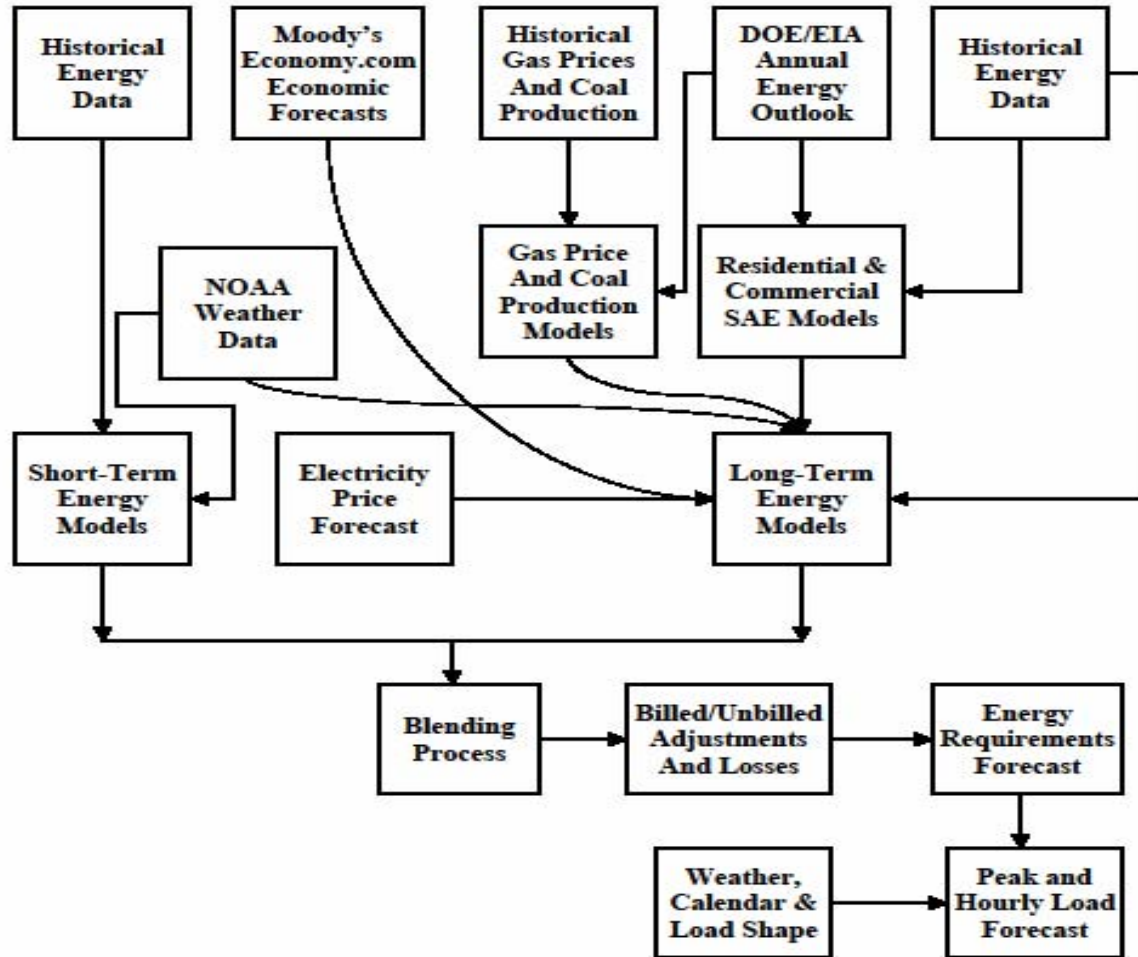
The data is used to drive the long-term forecast of kWh and customers, and to explain how AEP territory and the US as a whole are different.



Moody's Economy.com, a division of Moody's Analytics, is a leading independent provider of economic analysis, data, and forecasting and credit risk services.

Their worldwide client base includes the largest commercial and investment banks, insurance companies, financial services, mutual funds, governments at all levels, regulators, manufacturers, utilities, and industrial and technology companies.

American Electric Power Internal Load Forecasting Methodology



Peak Demand and Internal Energy Forecast Methodology

1. Input Data

Actual Data
5 years of Hourly
Company Load
Data

Weather Data
Hourly Average
Daily Temperatures

Load Forecast
Monthly KWh Load

**Customer Specific
Information:**
Expansion, Closings

2. Estimate Models

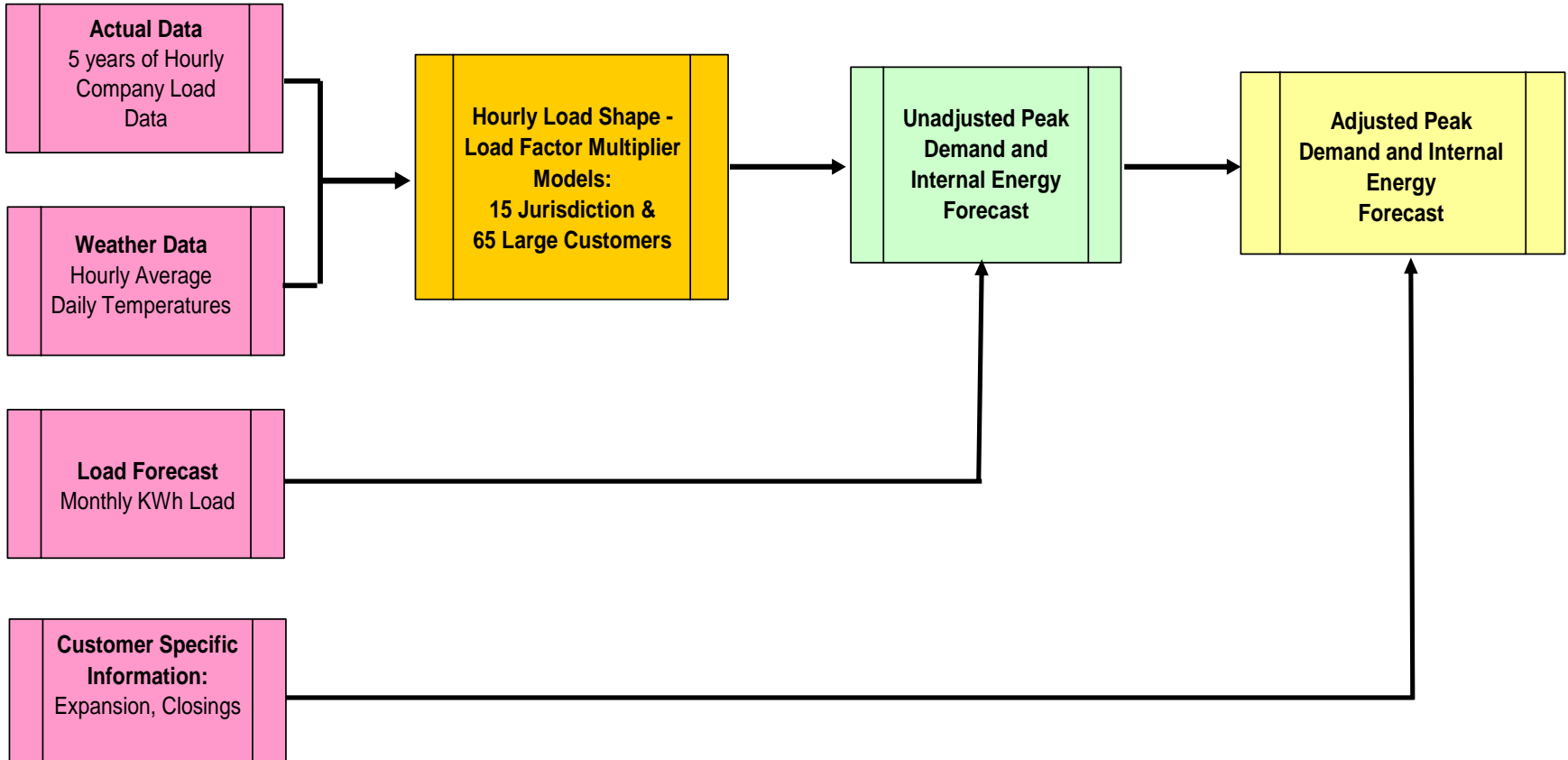
**Hourly Load Shape -
Load Factor Multiplier
Models:**
15 Jurisdiction &
65 Large Customers

3. Model Forecast

**Unadjusted Peak
Demand and
Internal Energy
Forecast**

4. Adjusted Forecast

**Adjusted Peak
Demand and Internal
Energy
Forecast**



Forecast Process

Energy Peak

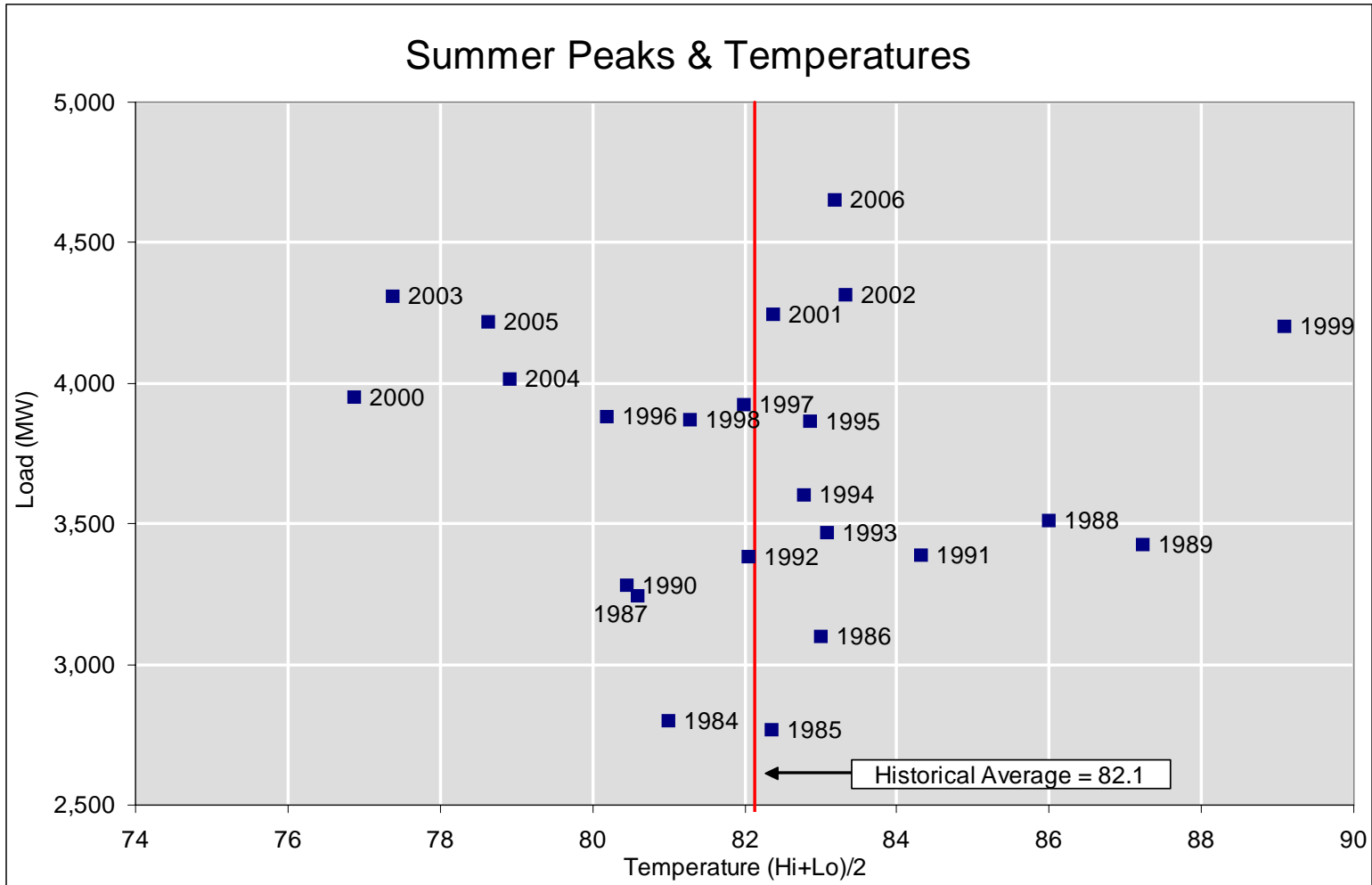
- Forecast economy
- Forecast energy (including large customer loads)
- Forecast hourly load shape
- “Fill” load shape with monthly energy forecast
- Peak is the maximum hourly load

- Assume typical weather and typical diversity

Sources of Peak Forecast Uncertainty

- Forecast of Economy
 - faster or slower growth
- Forecast of large customer load additions
 - Timing and size of load
 - Curtailable loads
- Peak Day Weather
- Peak Load Diversity: “The condition that exists when the peak demands of a variety of electric customers occur at different times.” (*Definition from multiple sources*)

I&M Peak Load



AEP - East Region

Historical and Forecast Peak Demand in MW

