Discussion of Weather Adjustment Methods

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Methods for Adjusting Actual Load for Impacts Due to Weather

- **Weather-response method:** Applies a regression model to determine the rate of change in load at design conditions, from which an adjustment to actual load is obtained. The peak load at design conditions may be an increase or a decrease from actual load.
- **Load-level method:** Applies a regression model to determine the load at design conditions, which may be an increase or a decrease from actual load.

- Methods give the same result when the actual load data intercepts the regression line.
- Regression models may be based upon one or more years of data, with the goal of including actual data at or above design conditions in the model.

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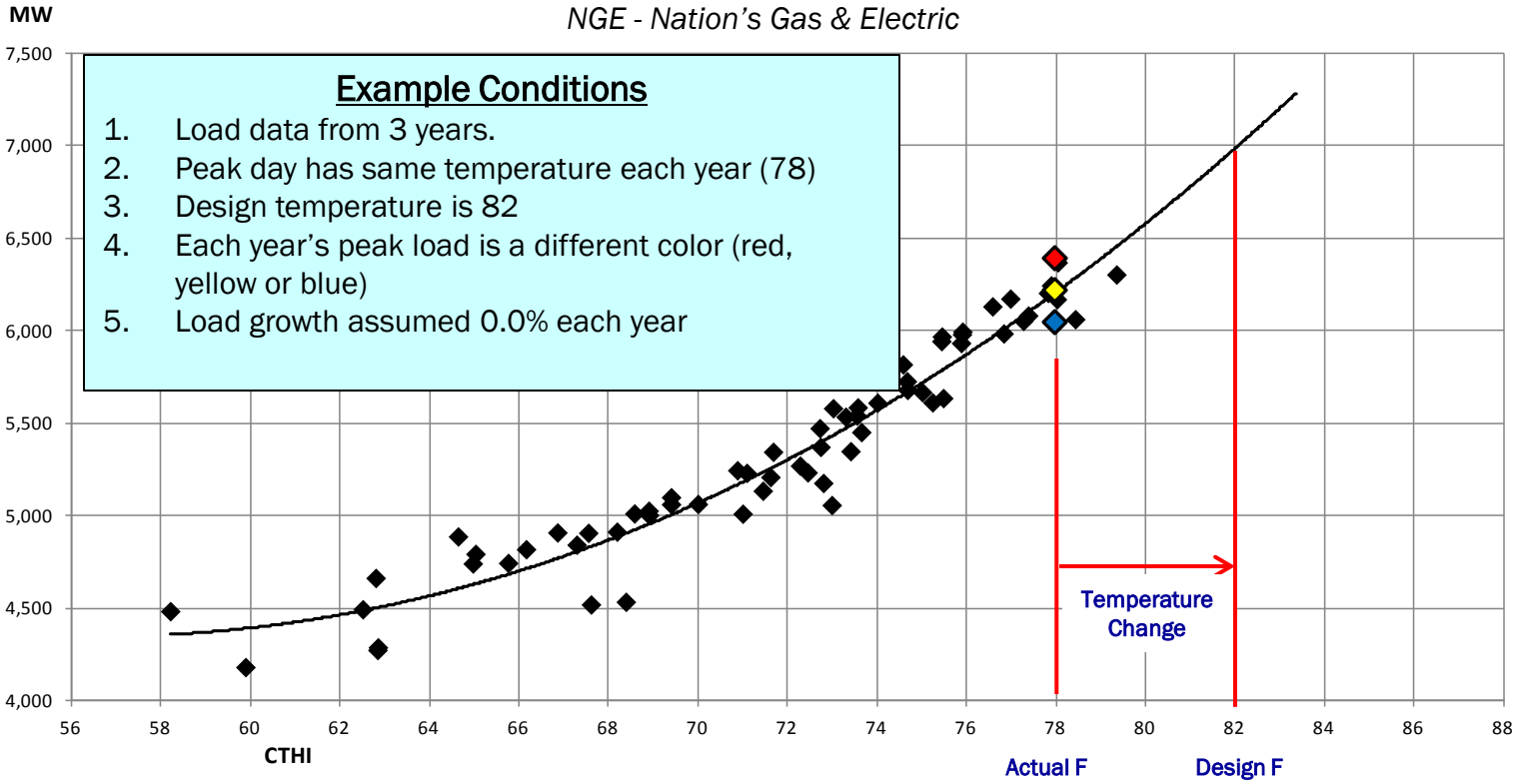
Example for Weather Adjustment Discussion



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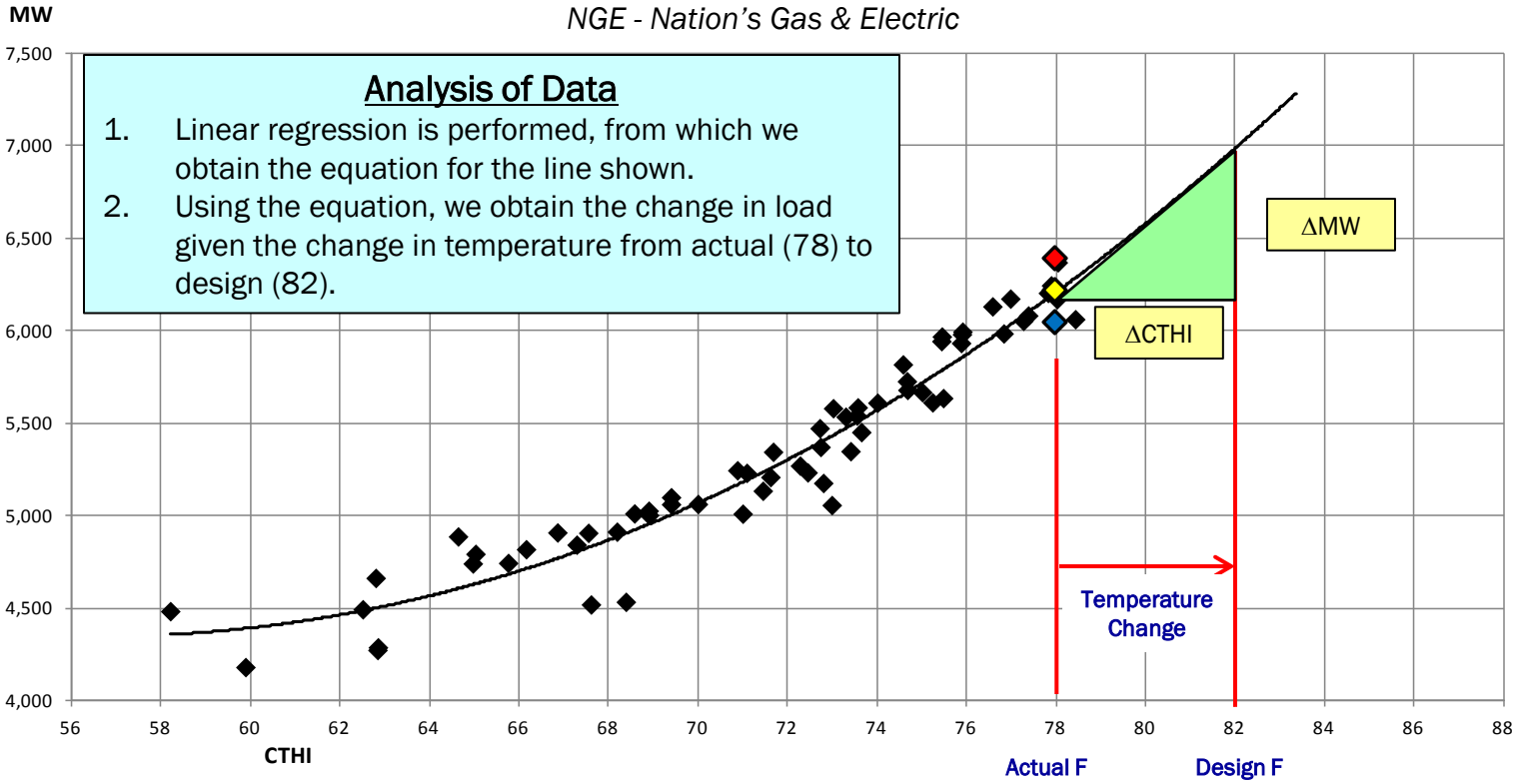
Example for Weather Adjustment Discussion



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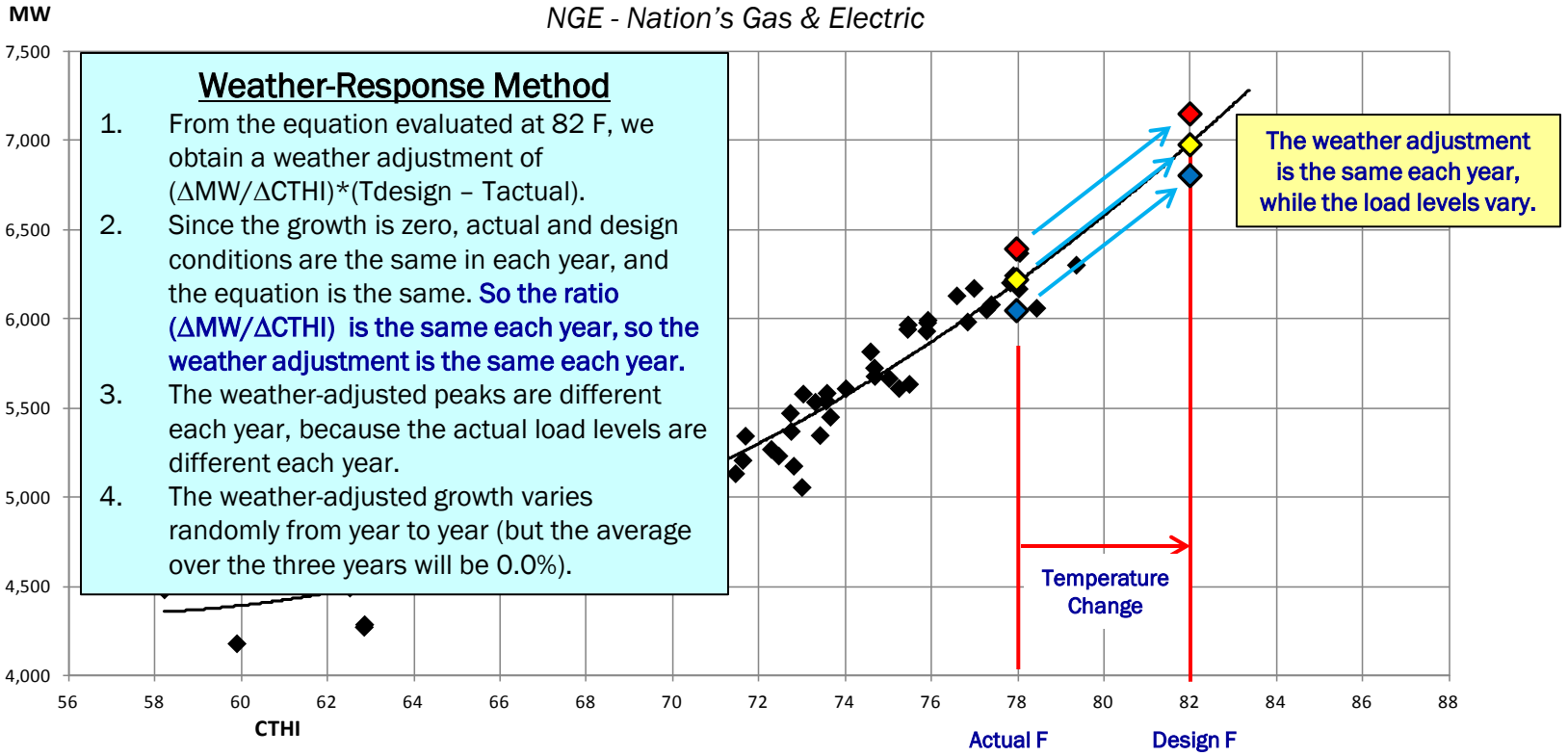
Example of Weather Response Method



Weather-Response Method

1. From the equation evaluated at 82 F, we obtain a weather adjustment of (ΔMW/ΔCTHI)*(Tdesign – Tactual).
2. Since the growth is zero, actual and design conditions are the same in each year, and the equation is the same. **So the ratio (ΔMW/ΔCTHI) is the same each year, so the weather adjustment is the same each year.**
3. The weather-adjusted peaks are different each year, because the actual load levels are different each year.
4. The weather-adjusted growth varies randomly from year to year (but the average over the three years will be 0.0%).

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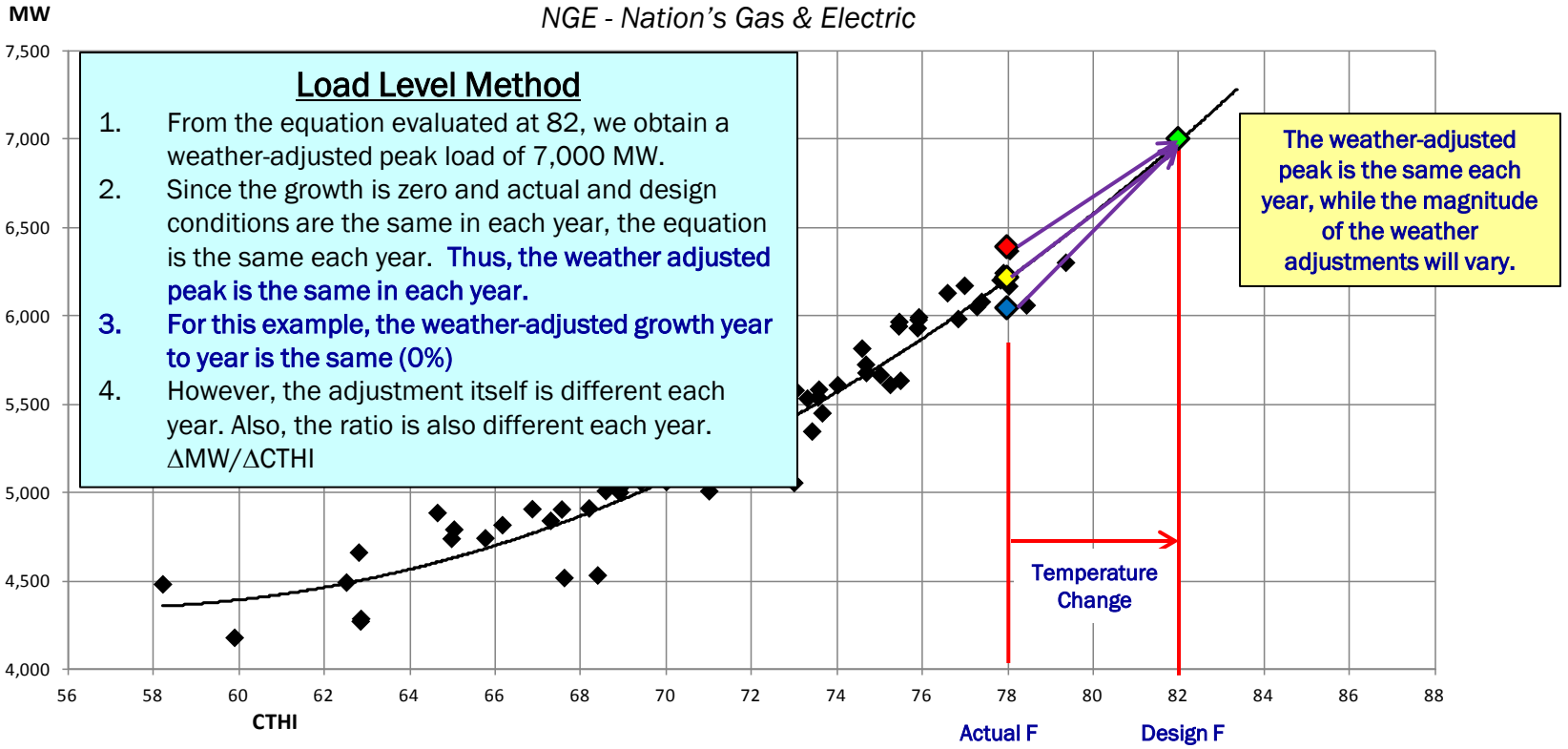
Example of Load Level Method



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- Planning the power system for the future
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