Northwest Power and Conservation Council

# Revised Economic and Demand Forecasts

April 14, 2009

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# Changes since the Last Draft Forecast

- **Improved calibration process for system peak load**
- **Updated system load profiles with 2003-2007 data**
- **Updated wholesale and retail electricity prices**
- **Incorporated CO2 cost adder in all fuel prices**
- **Updated Residential, Commercial and industrial sectors of the model for better synch with conservation supply curve.**
- **Incorporated impact of recession for 2009, 2010, 2011, based on GI short-term forecast as of March 2009.**



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# Incorporating Recession

- Lowered residential new construction activities.
- Increased the vacancy rates for commercial sector for 2008-2012
- Decreased capacity utilization factor for industrial sector.



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# Retail Rates and Impact of CO2 Emission Costs

- Residential customer's average monthly electricity bill is projected to increase from $75 dollars in 2010 to $120 dollars by 2030 ($2006)
- By 2030, the CO2 component of the electricity bill represents about 17% of retail electricity bill or about $20 dollars per month.



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# Implication of these updates

- Load growth is slower than draft forecast
- Medium forecast before conservation
  - Energy growing at 1.3% about 6500 MWa
  - Winter Peak growing by 7400 MW
  - Summer Peak growing by 9400 MW
- Range of increase in loads by 2030 across scenarios

  - Energy 3600 - 10,000 MWa
  - Winter Peak 4500 - 10,000 MW
  - Summer Peak 6500 - 13,000 MW



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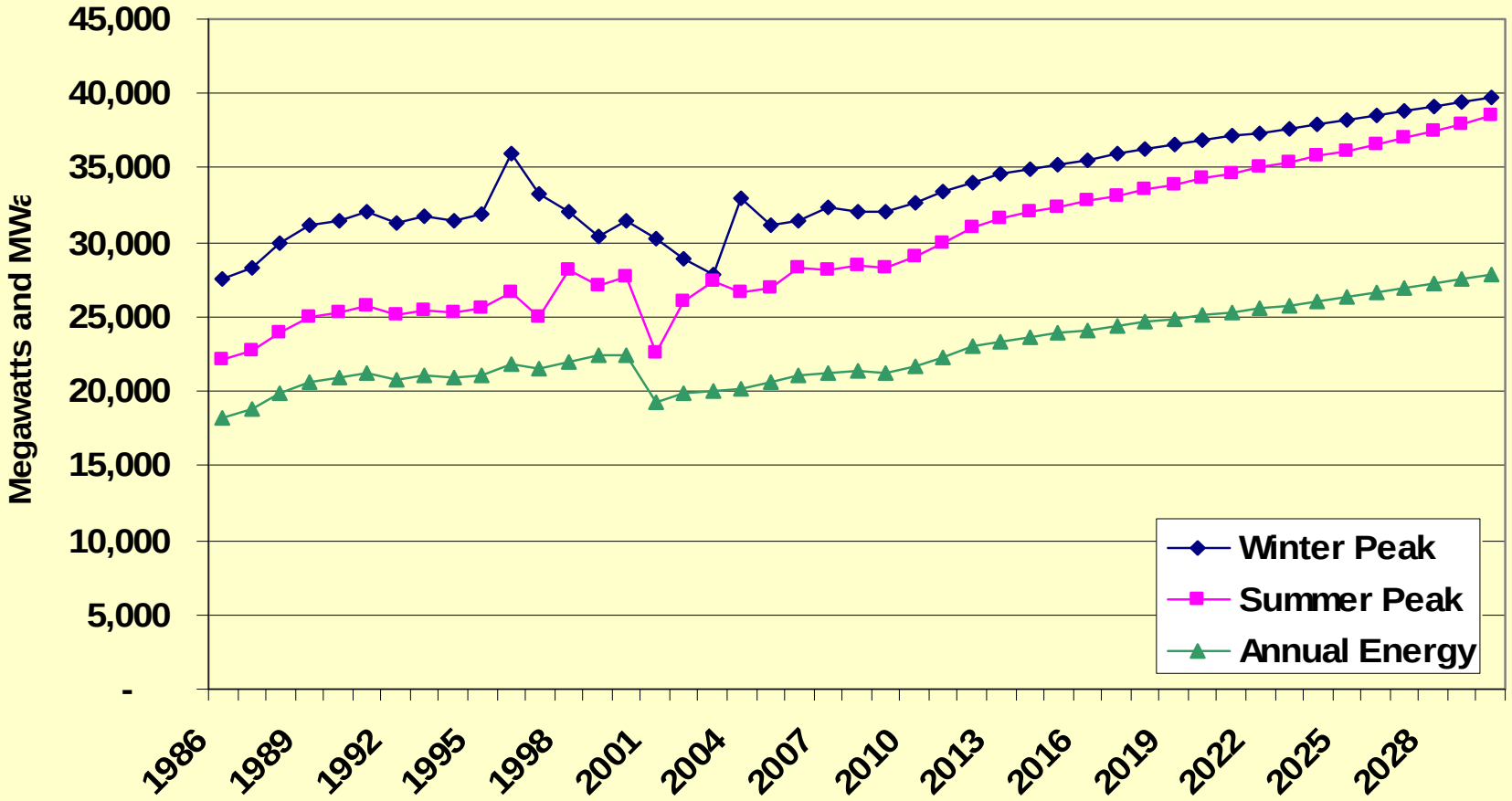
# Demand Forecasts

## Price Effect (prior to conservation)



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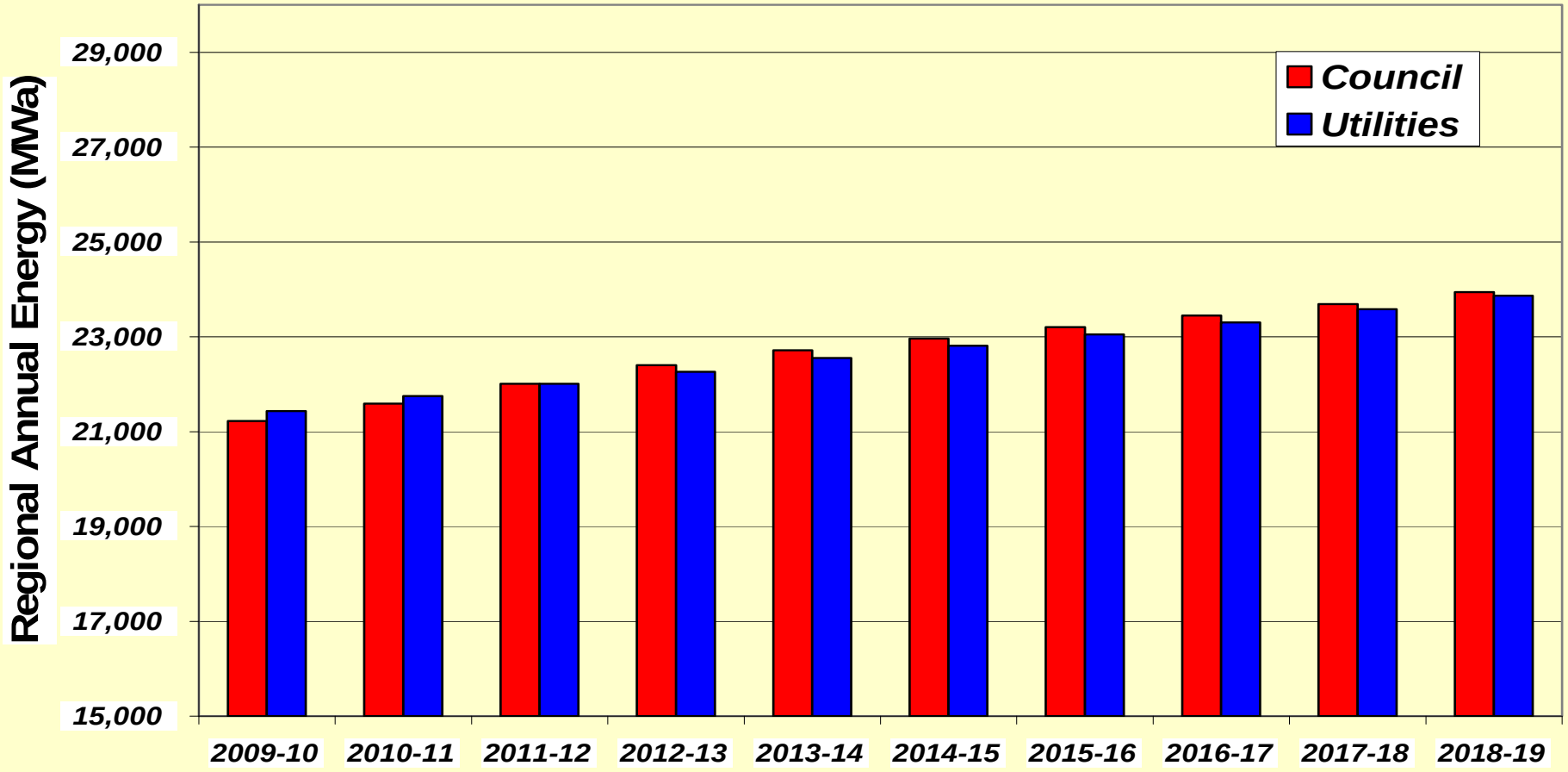
# Comparison of Council Forecasted Loads & PNUCC




Forecasted Energy is close. However equal treatment of conservation is questionable.

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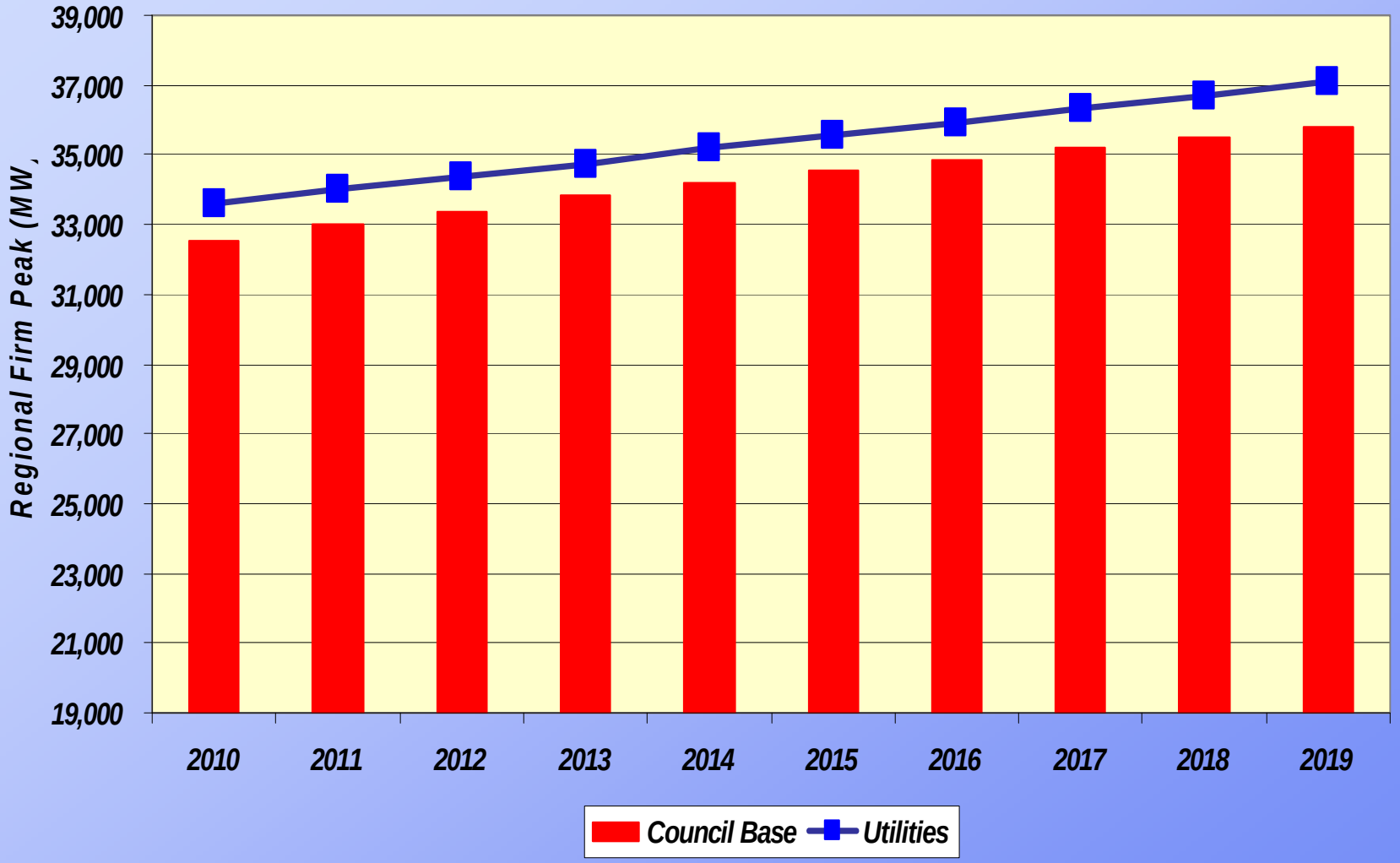
# Council January Peak Forecast is Lower than Utilities




Load diversity is one reason for Council's forecast being lower than sum of utilities forecasts

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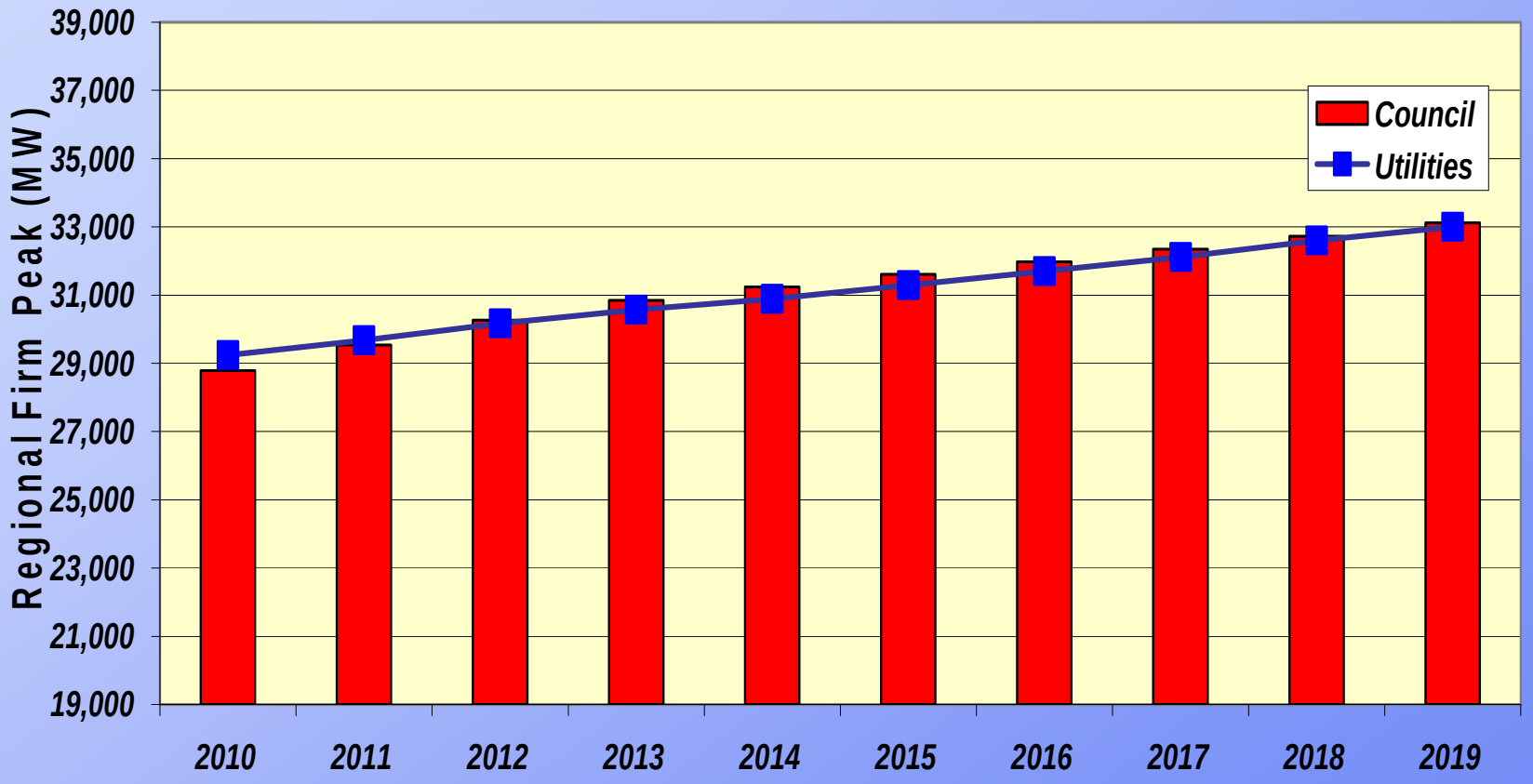
# Council Forcasts for July is very close to July Peak forecast from Utilities

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# Key findings and Recommendations

- Residential growth in AC and ICE dominates growth in residential sector. Consumer behavior for these two end-use require investigation.
- Commercial growth in elder-care needs closer understanding of this sector
- Even under “Normal” temperature assumptions, the summer and winter peaks become extremely close by the end of forecast period.
- Although conservation can substantially negate energy and peak load growth, projected faster summer peak growth suggests that conservation and DR resources in the region should increase focus on summer load reductions.



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