

STATE OF NEW JERSEY  
Board of Public Utilities

IN THE MATTER OF THE BOARD'S )  
INVESTIGATION OF CAPACITY )  
PROCUREMENT AND )  
TRANSMISSION PLANNING )  
)

DOCKET NO. EO11050309

Exhibits of  
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On behalf of The COMPETE Coalition

October 14, 2011

Figure 1:  
States with strong demand-side management programs

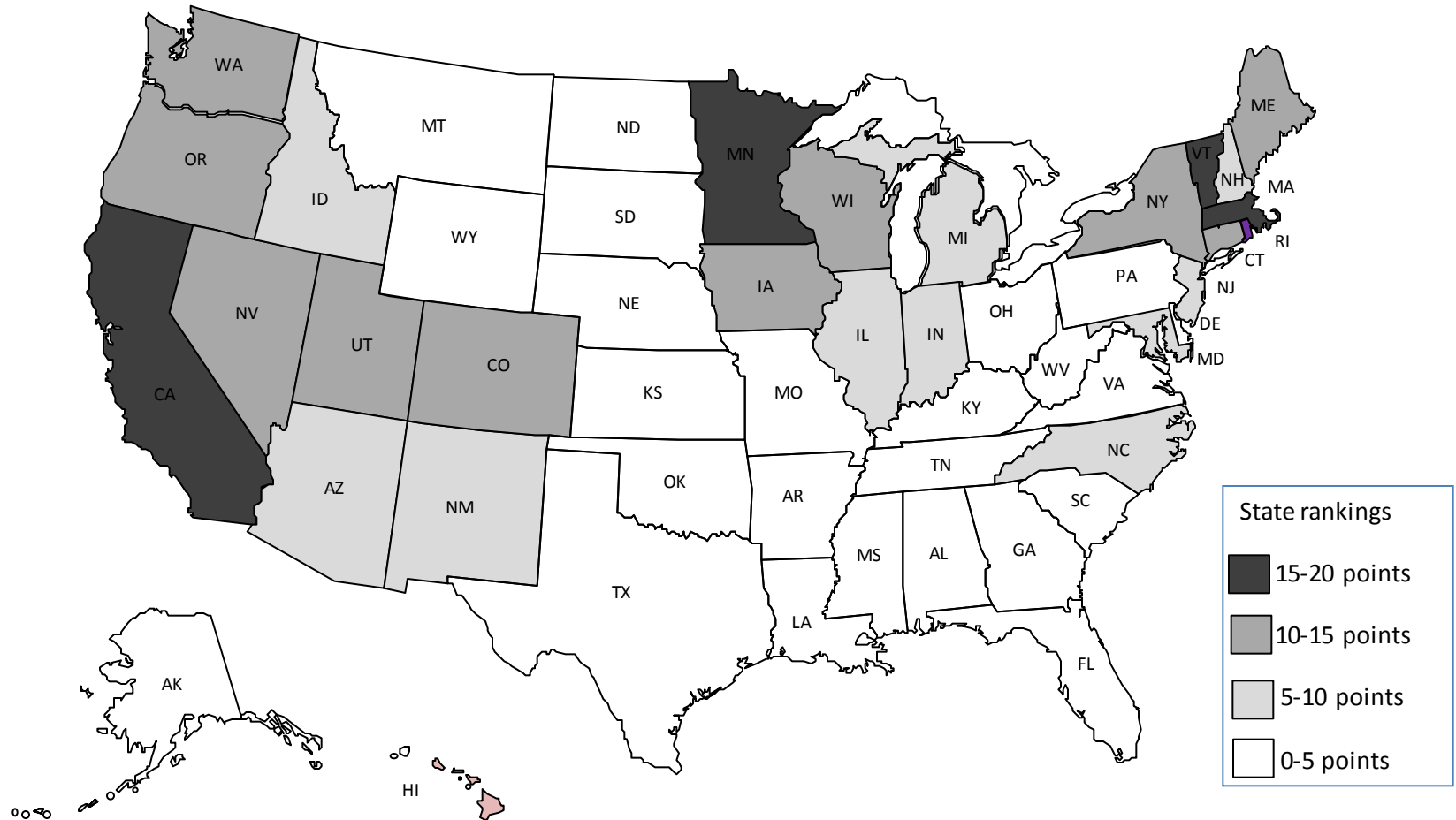
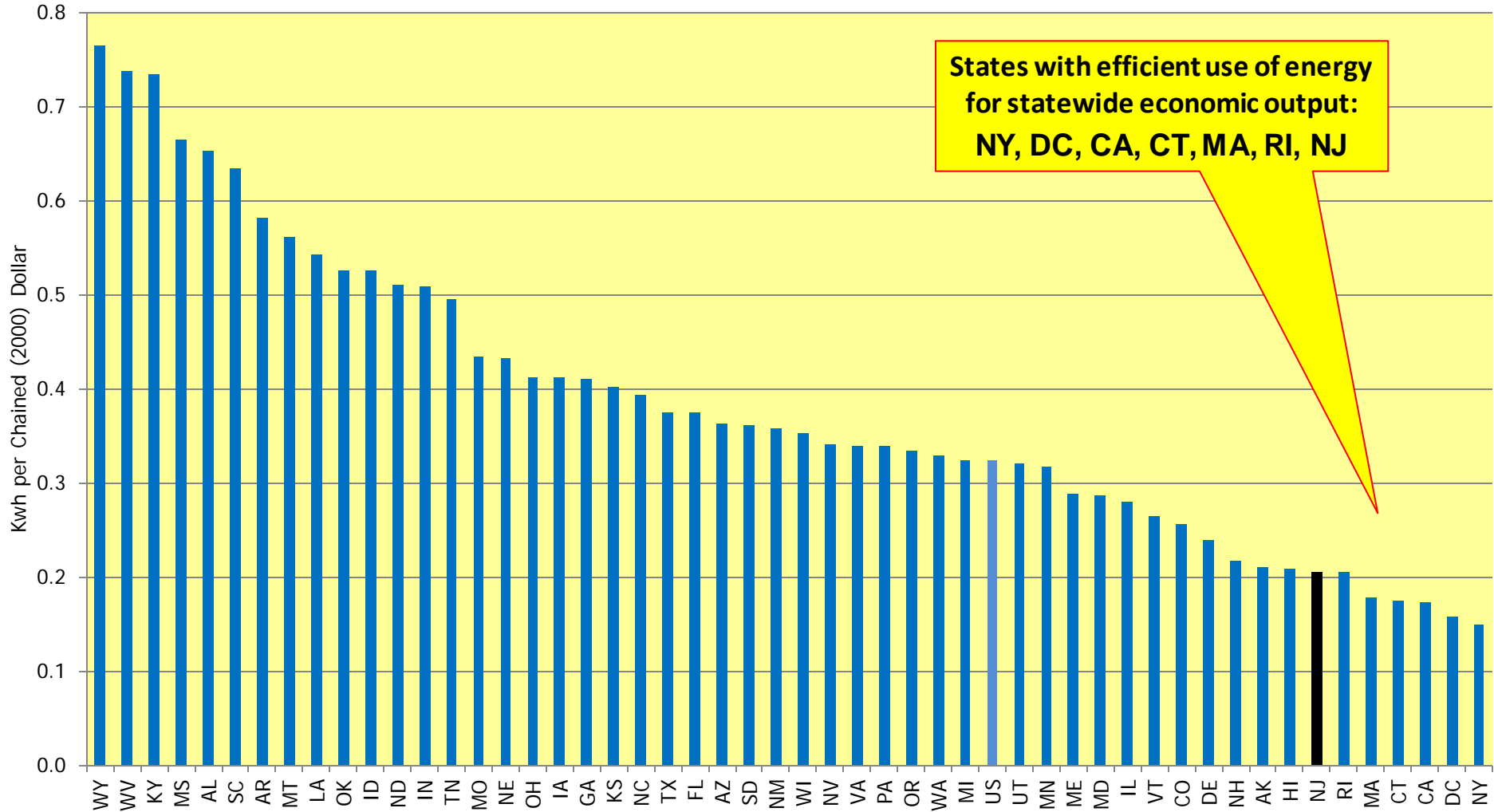
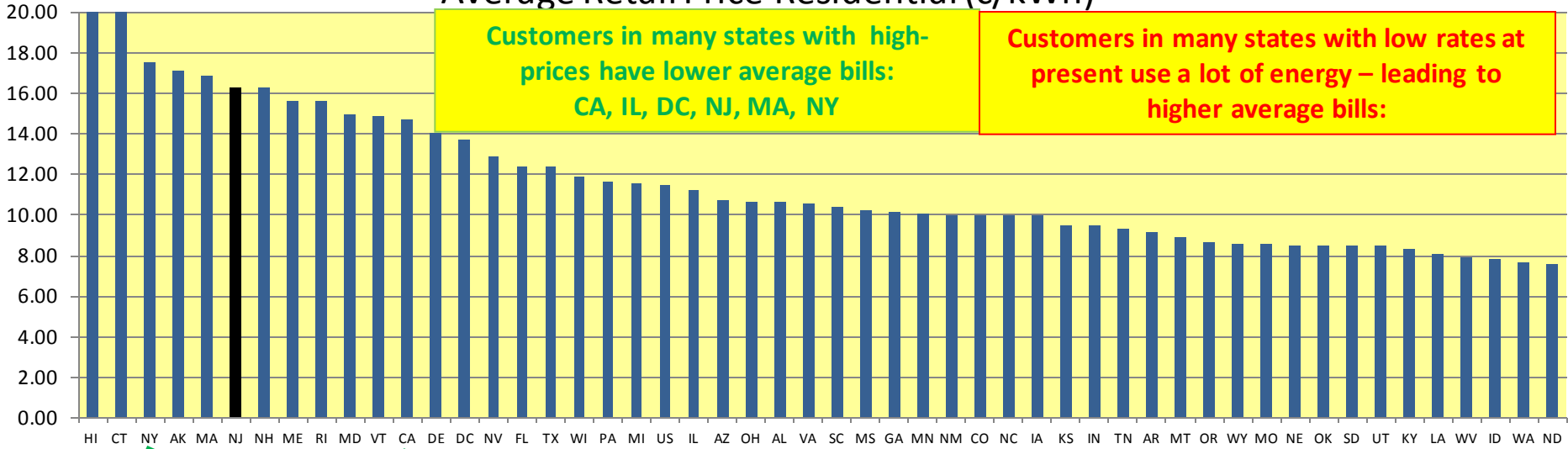


Figure 2:  
 Comparison of States:  
 Electricity per Dollar of Gross State Product



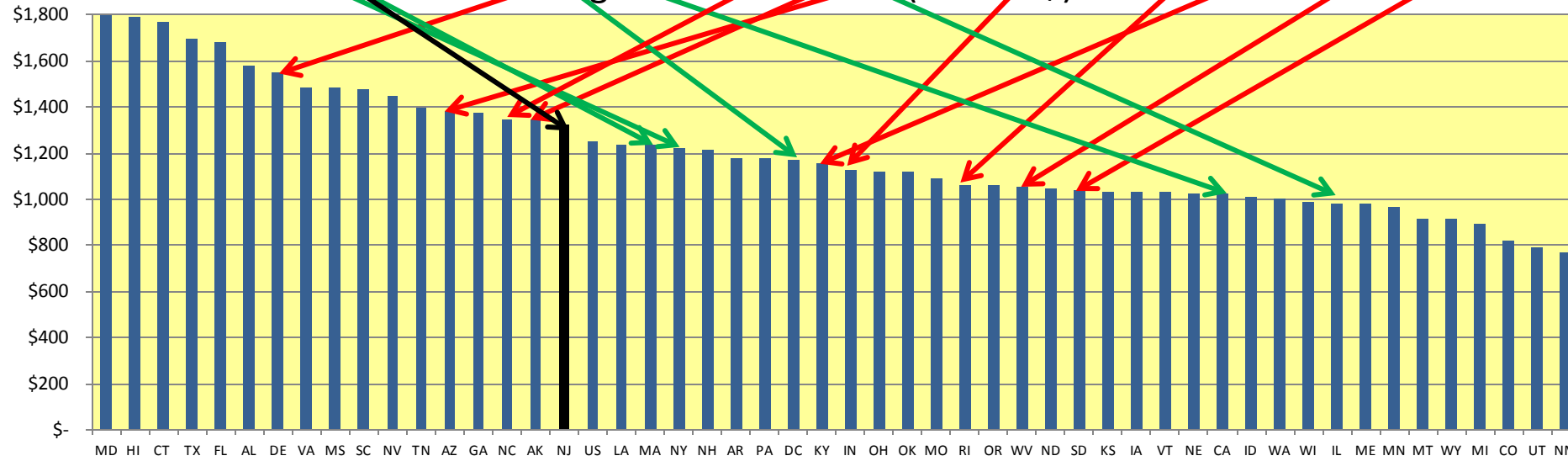
# Figure 3: Comparison of States: Average Unit Price of Electricity Versus Average Electricity Bill

## Average Retail Price Residential (c/kWh)



EIA data (2010)

## Average Bill - Residential (Annual \$)



## Figure 4 – Capacity Resources in New Jersey: Amounts Installed (2007-2011 YTD) and Obtained Through the PJM’S RPM Since 2007

**Table 5: Installed Capacity by Fuel Type by State (2007 - 2011 YTD)**

| State        | Biomass     | Coal           | Diesel     | Hydro        | Methane      | Natural Gas    | Nuclear      | Oil         | Other       | Solar       | Storage    | Wind         | Grand Total    |
|--------------|-------------|----------------|------------|--------------|--------------|----------------|--------------|-------------|-------------|-------------|------------|--------------|----------------|
| DE           | 0.0         | 23.0           | 0.0        | 0.0          | 9.0          | 38.0           | 0.0          | 26.2        | 0.0         | 0.0         | 0.0        | 0.0          | 96.2           |
| IL           | 0.0         | 0.0            | 0.0        | 0.0          | 6.4          | 666.0          | 140.0        | 0.0         | 0.0         | 0.0         | 0.0        | 270.0        | 1,082.4        |
| IN           | 0.0         | 10.0           | 0.0        | 0.0          | 0.0          | 19.0           | 0.0          | 0.0         | 0.0         | 0.0         | 0.0        | 220.0        | 249.0          |
| MD           | 0.0         | 0.0            | 0.0        | 0.0          | 12.0         | 139.7          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0        | 6.5          | 158.2          |
| NJ           | 0.0         | 0.0            | 0.0        | 0.0          | 19.2         | 411.4          | 236.0        | 17.0        | 0.0         | 24.4        | 0.0        | 0.0          | 708.0          |
| OH           | 0.0         | 195.0          | 0.0        | 0.0          | 16.4         | 13.0           | 0.0          | 0.0         | 0.0         | 1.0         | 0.0        | 0.0          | 225.4          |
| PA           | 31.4        | 60.0           | 8.0        | 156.0        | 30.4         | 828.0          | 308.0        | 0.0         | 20.0        | 1.1         | 0.0        | 108.6        | 1,551.5        |
| VA           | 0.0         | 66.0           | 0.0        | 27.0         | 66.3         | 1,436.0        | 170.0        | 6.7         | 0.0         | 0.0         | 0.0        | 0.0          | 1,772.0        |
| WV           | 0.0         | 746.0          | 0.0        | 0.0          | 0.0          | 0.0            | 0.0          | 0.0         | 0.0         | 0.0         | 0.0        | 97.2         | 843.2          |
| KY           | 0.0         | 20.0           | 0.0        | 0.0          | 0.0          | 0.0            | 0.0          | 0.0         | 0.0         | 0.0         | 0.0        | 0.0          | 20.0           |
| MI           | 0.0         | 0.0            | 0.0        | 0.0          | 6.4          | 0.0            | 0.0          | 0.0         | 0.0         | 0.0         | 0.0        | 0.0          | 6.4            |
| <b>TOTAL</b> | <b>31.4</b> | <b>1,120.0</b> | <b>8.0</b> | <b>183.0</b> | <b>166.1</b> | <b>3,551.1</b> | <b>854.0</b> | <b>49.9</b> | <b>20.0</b> | <b>26.5</b> | <b>0.0</b> | <b>702.3</b> | <b>6,712.3</b> |

**Table 2: New Capacity Resources Made Available to New Jersey in RPM Since Inception**

| Change in Capacity Availability   | New Jersey     |
|---|----------------|
| New Generation  | 534.8          |
| Generation Upgrades (not including reactivations)                       | 666.2          |
| Generation Reactivation   | 193.7          |
| Forward Demand and Energy Efficiency Resources                          | 1,947.4        |
| Cleared ICAP from Withdrawn or Canceled Retirements                     | 2,222.8        |
| <b>Total Impact on Capacity Availability in 2014/2015 Delivery Year</b> | <b>5,564.9</b> |

Source: Comments of PJM Interconnections, L.L.C. in Docket No. EO-11050309 (the New Jersey Board of Public Utility’s Investigation of Capacity Procurement Transmission Planning), dated June 17, 2011.

## Figure 5 – PJM Load Management in New Jersey



Source: PJM presentation (Mike Kormos, Sr. VP, Reliability Services, and Steve Herling, VP, Planning), "New Jersey Power Supply Load and Capacity Data, New Jersey Capacity Issues Technical Conference," Docket No. EO09110920, June 24, 2010

**Figure 6 –  
Demand-Side Resources Added Through PJM Capacity Auctions Since 2007**

| Constrained LDA                         | Zone    | Offered MW* |       |          | Cleared MW* |       |          |
|---|---------|-------------|-------|----------|-------------|-------|----------|
|   |         | Demand      | EE    | Total    | Demand      | EE    | Total    |
| EMAAC                                   | AECO    | 268.2       | 0.7   | 268.9    | 205.4       | 0.7   | 206.1    |
| EMAAC                                   | DPL     | 470.9       | 7.0   | 477.9    | 391.5       | 6.8   | 398.3    |
| EMAAC                                   | JCPL    | 553.0       | 2.2   | 555.2    | 444.0       | 2.0   | 446.0    |
| EMAAC                                   | PECO    | 992.4       | 8.4   | 1,000.8  | 830.5       | 6.6   | 837.1    |
| EMAAC                                   | PSEG    | 1,140.1     | 6.8   | 1,146.9  | 964.2       | 4.8   | 969.0    |
| EMAAC                                   | RECO    | 42.0        | -     | 42.0     | 31.2        | -     | 31.2     |
| EMAAC Sub Total                         |         | 3,466.6     | 25.1  | 3,491.7  | 2,866.8     | 20.9  | 2,887.7  |
| MAAC                                    | PEPCO   | 1,022.5     | 43.3  | 1,065.8  | 893.1       | 42.9  | 936.0    |
| MAAC                                    | BGE     | 1,450.9     | 119.3 | 1,570.2  | 1,341.3     | 118.4 | 1,459.7  |
| MAAC                                    | METED   | 469.9       | 4.2   | 474.1    | 398.4       | 4.1   | 402.5    |
| MAAC                                    | PENELEC | 498.6       | 3.9   | 502.5    | 437.7       | 3.6   | 441.3    |
| MAAC                                    | PPL     | 1,505.3     | 11.8  | 1,517.1  | 1,299.5     | 9.7   | 1,309.2  |
| MAAC Sub Total**                        |         | 8,413.8     | 207.6 | 8,621.4  | 7,236.8     | 199.6 | 7,436.4  |
| RTO                                     | AEP     | 1,665.4     | 9.8   | 1,675.2  | 1,635.1     | 9.2   | 1,644.3  |
| RTO                                     | APS     | 912.0       | 5.9   | 917.9    | 886.8       | 5.5   | 892.3    |
| RTO                                     | ATSI    | 1,055.1     | 3.0   | 1,058.1  | 955.7       | 2.7   | 958.4    |
| RTO                                     | COMED   | 1,546.9     | 546.2 | 2,093.1  | 1,535.7     | 546.2 | 2,081.9  |
| RTO                                     | DAY     | 265.1       | 3.7   | 268.8    | 231.9       | 3.7   | 235.6    |
| RTO                                     | DEOK    | 60.4        | -     | 60.4     | 54.6        | -     | 54.6     |
| RTO                                     | DOM     | 1,381.3     | 52.6  | 1,433.9  | 1,359.5     | 52.1  | 1,411.6  |
| RTO                                     | DUQ     | 245.6       | 3.1   | 248.7    | 222.3       | 3.1   | 225.4    |
| Grand Total                             |         | 15,545.6    | 831.9 | 16,377.5 | 14,118.4    | 822.1 | 14,940.5 |
| *All MW Values are in UCAP Terms        |         |             |       |          |             |       |          |
| **MAAC Subtotal includes all MAAC Zones |         |             |       |          |             |       |          |

Source: Comments of PJM Interconnections, L.L.C. in Docket No. EO-11050309 (the New Jersey Board of Public Utility's Investigation of Capacity Procurement Transmission Planning), dated June 17, 2011.

Figure 7:  
Demand response in PJM's Base Residual Auction

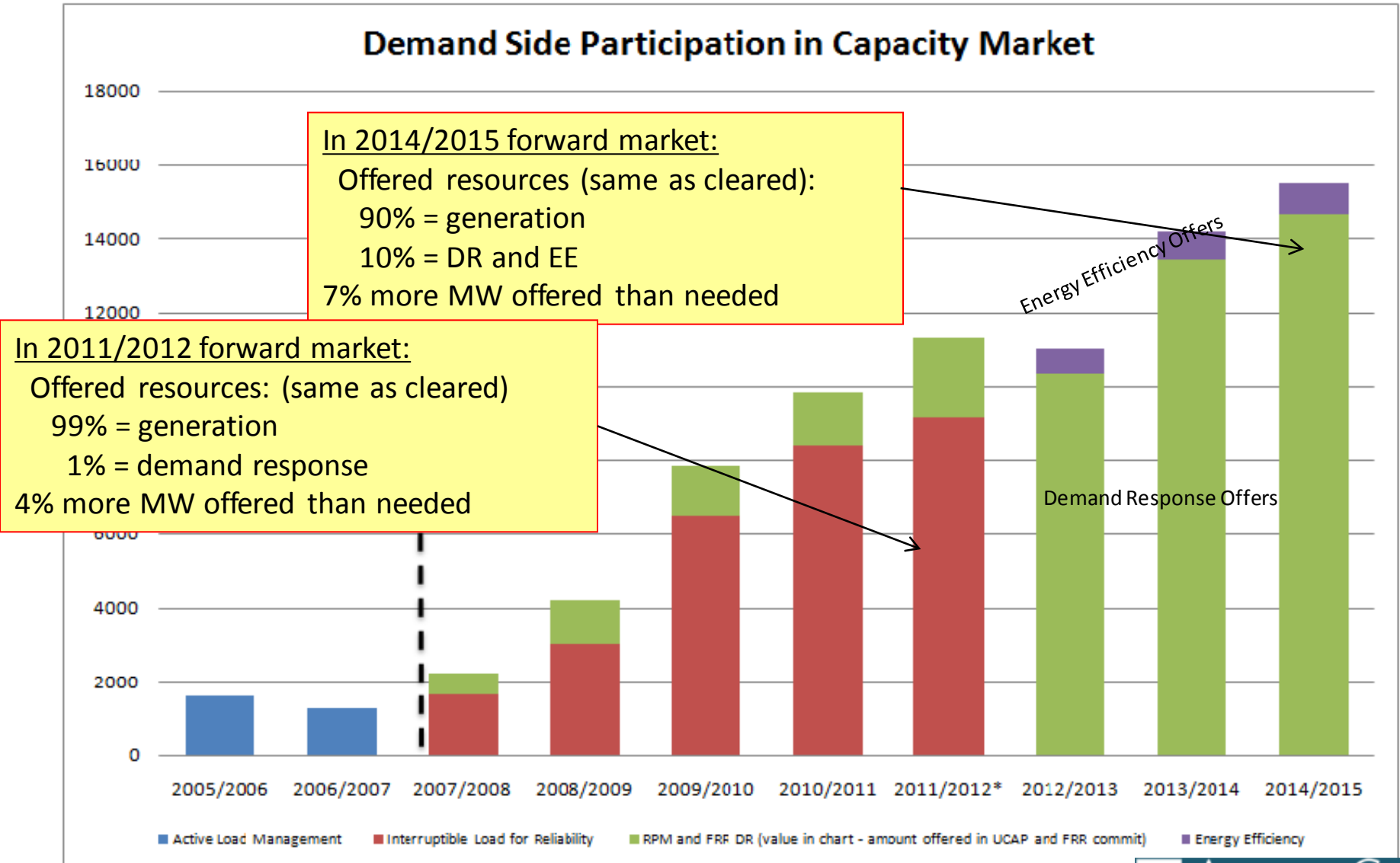


Figure 8 –  
PJM Base Residual Auctions: Offered and Cleared Resources

| Auction Results (all values in UCAP**) | RTO*             |                  |                  |                  |                  |                  |                  |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|  | 2008/2009        | 2009/2010        | 2010/2011        | 2011/2012        | 2012/2013        | 2013/2014        | 2014/2015        |
| Generation Offered                     | 131,164.8        | 132,614.2        | 132,124.8        | 136,067.9        | 134,873.0        | 147,188.6        | 144,108.9        |
| DR Offered                             | 715.8            | 936.8            | 967.9            | 1,652.4          | 9,847.6          | 12,952.7         | 15,545.6         |
| EE Offered                             | -                | -                | -                | -                | 652.7            | 756.8            | 831.9            |
| <b>Total Offered</b>                   | <b>131,880.6</b> | <b>133,551.0</b> | <b>133,092.7</b> | <b>137,720.3</b> | <b>145,373.3</b> | <b>160,898.1</b> | <b>160,486.3</b> |
| Generation Cleared                     | 129,061.4        | 131,338.9        | 131,251.5        | 130,856.6        | 128,527.4        | 142,782.0        | 135,034.2        |
| DR Cleared                             | 536.2            | 892.9            | 939.0            | 1,364.9          | 7,047.2          | 9,281.9          | 14,118.4         |
| EE Cleared                             | 0.0              | 0.0              | 0.0              | 0.0              | 568.9            | 679.4            | 822.1            |
| <b>Total Cleared</b>                   | <b>129,597.6</b> | <b>132,231.8</b> | <b>132,190.5</b> | <b>132,221.5</b> | <b>136,143.5</b> | <b>152,743.3</b> | <b>149,974.7</b> |
| Uncleared                              | 2,283.0          | 1,319.2          | 902.2            | 5,498.8          | 9,229.8          | 8,154.8          | 10,511.6         |

\* RTO numbers include all LDAs

\*\* UCAP calculated using sell offer EFORD for Generation Resources. DR and EE UCAP values include appropriate FPR and DR Factor.

In 2011/2012 forward market:

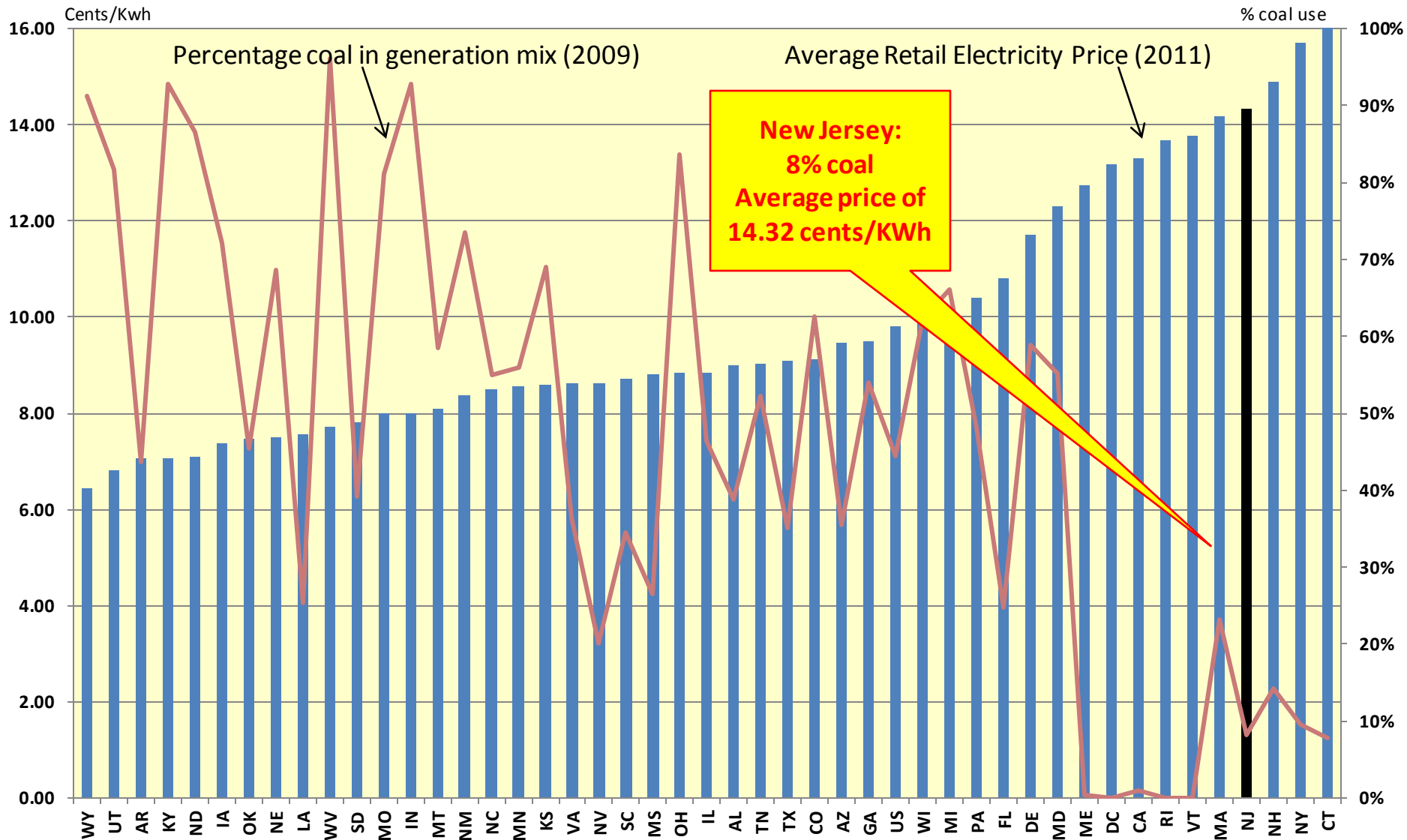
Offered resources:  
 99% = generation  
 1% = demand response  
 Of the amounts cleared:  
 99% = generation  
 1% = demand response  
 4% more MW offered than needed

In 2014/2015 forward market:

Offered resources:  
 90% = generation  
 10% = demand response and energy efficiency  
 Of the amounts cleared:  
 90% = generation  
 10% = demand response and energy efficiency  
 7% more MW offered than needed

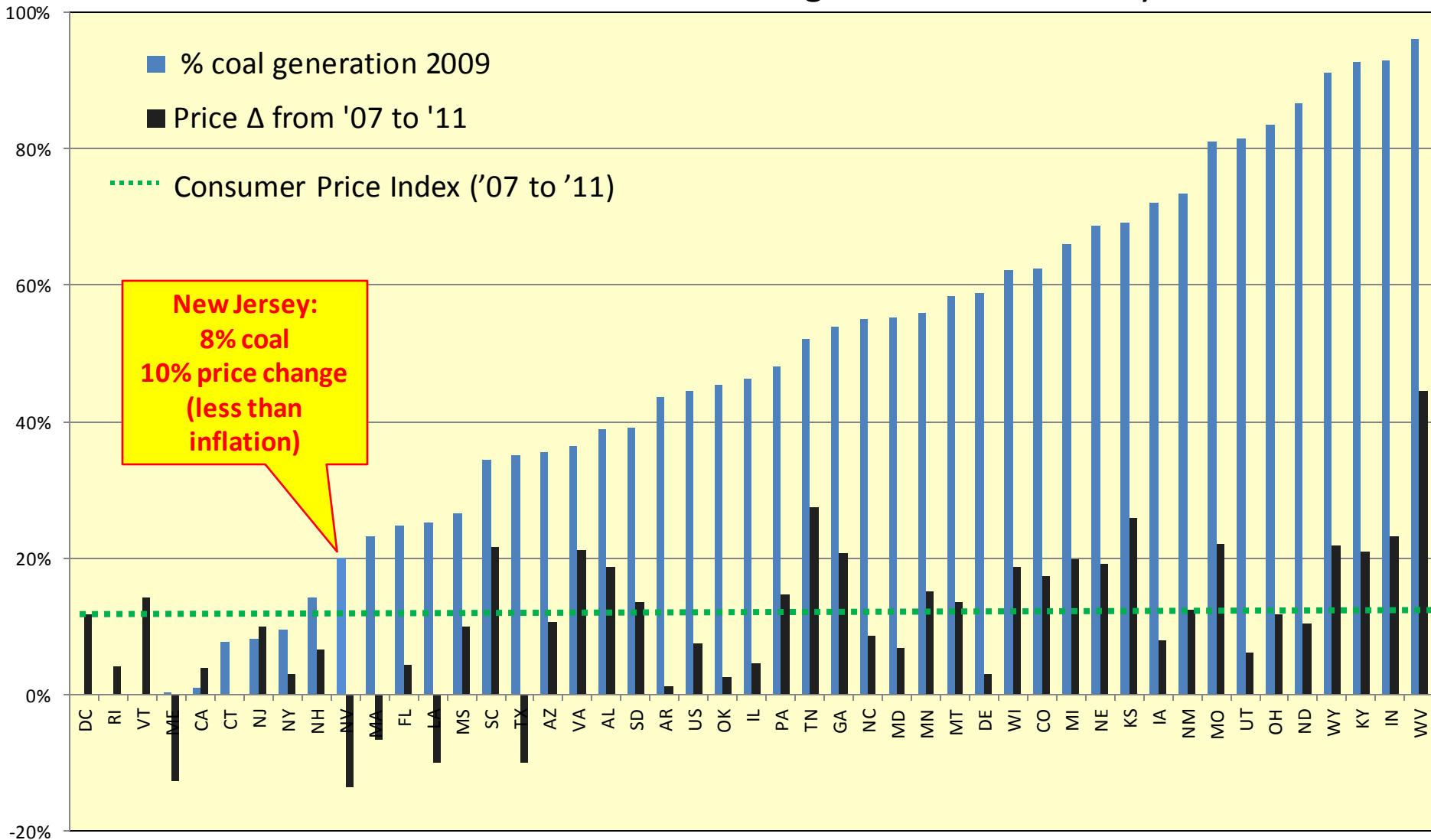
9 MW of generation offered by not cleared:  
 To be retired?

# Figure 9: Comparison of States' Reliance on Coal for Power and Change in Retail Electricity Price



Source: Energy Information Administration data. The chart does not include two states (HI, AK) within the lower 48, and removes 3 states in the Pacific Northwest (WA, OR, ID) that have more than 80% of their generation produced at hydroelectric power plants.

# Figure 9: Comparison of States' Reliance on Coal for Power and Change in Retail Electricity Price



The chart does not include two states (HI, AK) within the lower 48, and removes 3 states in the Pacific Northwest (WA, OR, ID) that have more than 80% of their generation produced at hydroelectric power plants.

Sources: Percentage coal in state generation mix and electricity price data are from Energy Information Administration; CPI data are from the Bureau of Economic Analysis.