**Summary of**

**Electric to Natural Gas Water Heater Conversion Program**

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| **Assumptions** |
| Description | Value | Source |
| Inflation Rate | 3.0% | Staff Analysis[[1]](#footnote-1) |
| Cost of Capital/ Discount Rate | 9.0% | Staff Analysis |
| Measure Life | 13 Years | http://www.aceee.org/Consumerguide/waterheating.htm |
| Electric Avoided Cost | See Attached | Staff Analysis (attached)[[2]](#footnote-2) |
| Natural Gas Avoided Cost | See Attached | Staff Analysis (attached)[[3]](#footnote-3) |
| Measure Cost | $900[[4]](#footnote-4) | http://www.aceee.org/Consumerguide/waterheating.htm |
| Avoided Cost Alternate Fuel Eq. | $8004 | http://www.aceee.org/Consumerguide/waterheating.htm |
| Electricity Usage Change | -4,875 kWh[[5]](#footnote-5) | http://www.aceee.org/Consumerguide/waterheating.htm |
| Natural Gas Usage Change | +25 Mcf5 | http://www.aceee.org/Consumerguide/waterheating.htm |
| Incentive | $900[[6]](#footnote-6) | Company |
| Net-to-Gross Ratio | 1.0 | TRM Order, page 17 |
| Participation | 1[[7]](#footnote-7) | Company |
|  |
| **Results** |
| Test[[8]](#footnote-8) | Net Benefit | Benefit/Cost Ratio |
| Total Resource Cost Test | $6,149 | 2.80 |
| Participant Test | $7,049 | 3.07 |
| Rate Impact Measure Test | $1,610[[9]](#footnote-9) | 1.17 |
| Program Administrator Cost Test | $5,3499 | 2.57 |
| Total Energy Savings | 32,333,287 Btus[[10]](#footnote-10) | - |

1. From the staff avoided cost spreadsheet; the escalation rate assumed for natural gas distribution costs. [↑](#footnote-ref-1)
2. I conservatively assume a 100% load factor for water heating (Staff’s calculation assumes 53%), but I think this is reasonable for this particular evaluation and obviates the need to make a separate estimate of demand savings from the measure. [↑](#footnote-ref-2)
3. See my escalation in out-years to accommodate a 13-year measure life. [↑](#footnote-ref-3)
4. The ACEEE value is for November, 2007. I escalated at 3% for two years to develop 2009 value. [↑](#footnote-ref-4)
5. Consistent with California Energy Commission assumptions and the assumed efficiency factors (.67/.97) of the TRM. [↑](#footnote-ref-5)
6. Assumed to be equal to the cost of the measure ($900) to minimize free-ridership. [↑](#footnote-ref-6)
7. Evaluated 1 participant, on the assumption that we are focused on the TRC ratio and that ratio will remain unchanged whether we have 1 or 1,000,000 participants. [↑](#footnote-ref-7)
8. Test result details attached as spreadsheet “WH Conversion Evaluation.” [↑](#footnote-ref-8)
9. Assumes that the avoided cost is equal to the retail rate. [↑](#footnote-ref-9)
10. See calculations attached in the spreadsheets “source-to-site” and “Energy Savings.” [↑](#footnote-ref-10)