

**CALMAC Study ID CPU0035.01
Volume 11 of 15
Appendix J**

**Embedded Energy in Water Studies
Study 1: Statewide and Regional Water-Energy Relationship**

**Prepared by
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**Prepared for the
California Public Utilities Commission
Energy Division**

**Managed by
California Institute for Energy and Environment**

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Appendix J Scenario Inputs

J.1 Baseline Inputs

Baseline inputs are embedded in the model; they are not editable by users and cannot be changed via the input section of the model. The tables below document in the inputs for the Baseline scenario embedded in the model

| | |
|--|----------|
| Demand Scenario | Baseline |
| Colorado River Aqueduct Imports | Average |
| Reduction in Delta Flow 2010 | 20% |
| Reduction in Delta Flow 2020 | N/A |
| Reduction in Delta Flow 2030 | N/A |

| Region | NC | SF | CC | SC | SR | SJ | TL | NL | SL | CR |
|----------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|
| Year | 2010 | 2010 | 2010 | 2010 | 2010 | 2010 | 2010 | 2010 | 2010 | 2010 |
| Urban Demand | Percent Change | | | | | | | | | |
| Large Landscape | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Commercial | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Industrial | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Residential - Interior | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Residential - Exterior | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Agricultural Demand | Percent Change | | | | | | | | | |
| Crop Production | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Supply | New Construction (TAF) | | | | | | | | | |
| Recycled Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Seawater Desalination | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Brackish Desalination | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surface Storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

J.1.1 Scenario 1 Inputs

| | |
|--|------------|
| Demand Scenario | Low Demand |
| Colorado River Aqueduct Imports | High |
| Reduction in Delta Flow 2020 | 15% |
| Reduction in Delta Flow 2030 | 0% |

| Region | NC | | SF | | CC | | SC | | SR | | SJ | | TL | | NL | | SL | | CR | |
|----------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Year | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 |
| Urban Demand | Percent Change | | | | | | | | | | | | | | | | | | | |
| Large Landscape | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% |
| Commercial | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% |
| Industrial | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% |
| Residential - Interior | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% |
| Residential - Exterior | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% | -20% | -25% |
| Agricultural Demand | Percent Change | | | | | | | | | | | | | | | | | | | |
| Crop Production | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Supply | New Construction (TAF) | | | | | | | | | | | | | | | | | | | |
| Recycled Water | 17 | 33 | 116 | 232 | 32 | 64 | 464 | 928 | 103 | 207 | 73 | 146 | 76 | 153 | 4 | 9 | 32 | 65 | 81 | 163 |
| Seawater Desalination | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Brackish Desalination | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surface Storage | 38 | 76 | 7 | 15 | 12 | 25 | 23 | 45 | 161 | 323 | 115 | 230 | 20 | 41 | 12 | 24 | 5 | 9 | 6 | 12 |

J.1.2 Scenario 2 Inputs

| | |
|--|-------------|
| Demand Scenario | High Demand |
| Colorado River Aqueduct Imports | Low |
| Reduction in Delta Flow 2020 | 0% |
| Reduction in Delta Flow 2030 | -20% |

| Region | NC | | SF | | CC | | SC | | SR | | SJ | | TL | | NL | | SL | | CR | |
|----------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Year | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 |
| Urban Demand | Percent Change | | | | | | | | | | | | | | | | | | | |
| Large Landscape | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% |
| Commercial | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% |
| Industrial | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% |
| Residential - Interior | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% |
| Residential - Exterior | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% | -20% |
| Agricultural Demand | Percent Change | | | | | | | | | | | | | | | | | | | |
| Crop Production | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Supply | New Construction (TAF) | | | | | | | | | | | | | | | | | | | |
| Recycled Water | 3 | 5 | 23 | 35 | 6 | 10 | 93 | 139 | 21 | 31 | 15 | 22 | 15 | 23 | 1 | 1 | 6 | 10 | 16 | 24 |
| Seawater Desalination | 0 | 0 | 0 | 0 | 10 | 21 | 100 | 200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Brackish Desalination | 0 | 0 | 0 | 0 | 14 | 28 | 30 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 11 |
| Surface Storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |