Water-Energy Nexus Calculator Workplan (Group D - D14.01)

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Webex Participant Guide

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Link to: Cisco Webex Participant Guide
Project Team

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- **Project Overview**
- Water-Energy (W-E) Calculator Background
- Task 1: Develop a Workplan
- Task 2: Develop a Revised W-E Calculator
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Project Goals and Objectives

The goal of the project is to develop a new, simpler Water-Energy Calculator (W-E Calculator 2.0).

In support of this goal, we have three primary objectives:

1. Engage stakeholders to identify key issues and concerns to inform changes to the the W-E Calculator;
2. Revise the W-E Calculator, in accordance with Decision 17-12-010, the Water Energy Joint Utility Plan of Action, and input received from stakeholders; and
3. Provide readable and accessible documentation for the W-E Calculator 2.0, along with a help desk and recorded training session.
Project Deliverables

1. W-E Calculator 2.0 Workplan: The final version of the draft workplan presented here and now available on the CPUC website.

2. W-E Calculator 2.0: A new, improved, and simpler W-E Calculator to estimate the embedded-energy savings of water conservation activities.


4. Project report: The final report documenting the process for developing the revised W-E Calculator.
Task Plan

**Task 1:**
Develop a Workplan (Spring 2021)
Deliverable: 1

**Task 2:**
Develop a Revised W-E Calculator (Fall 2021)
Deliverables: 2 & 3 (draft)

**Task 3:**
Deliverables: 2, 3, & 4
Engagement and Outreach

- Engagement with CPUC Staff
- Engagement with Energy IOUS, Consultants, Experts, and Stakeholders
- Engagement with Water Utilities
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Water-Energy (W-E) Calculator Background

- In 2014, the CPUC adopted two water-energy tools:
  - **Avoided Water Capacity Cost Model (Water Tool)**
    - avoided capacity cost of water (in $/MGD).
  - **Water-Energy Calculator (W-E Calculator)**
    - average embedded energy savings of water-efficiency programs (in kWh and therms),
    - IOU avoided embedded-energy cost (in $); and
    - avoided water capacity cost (in $)
Relationship with Other CPUC Tools

- **Inputs to the W-E Calculator**
  - **E3 Avoided Cost Model**: Provides hourly avoided energy costs
  - **Water Tool**: Provides avoided capacity cost ($/MGD)
  - **DEER and eTRM**: Provides information on some water-efficiency measures, including useful life and incremental cost

- **Outputs from the W-E Calculator**
  - **Cost-Effectiveness Tool (CET)**: Outputs from W-E Calculator can be (but are not currently) integrated into the CET
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Task 1. Develop a Workplan

- Reviewed 17 documents, including previous CPUC decisions, Joint Plan of Action, and stakeholder comments submitted about the W-E Calculator
- Interviewed 22 stakeholders, including representatives from investor-owned energy utilities, water-energy experts, and CPUC staff and consultants
- Identified four areas for improvements:
  - Simplify the W-E Calculator
  - Enhance W-E Calculator Functionality
  - Ensure Integration with Other CPUC Tools
  - Expand Education and Outreach
Simplify the W-E Calculator

- Remove avoided water and wastewater utility cost test (will focus on developing embedded energy estimate in kWh/therms)
- Remove water-related environmental benefits from model (will focus on developing embedded energy estimate in kWh/therms)
- Add simple menu to select water system components and energy intensity values
- (Do not add GHG calculations, already done via other models)
Enhance W-E Calculator Functionality

• Add a mechanism, such as a GIS overlay or look-up table, to let the user select the appropriate hydrologic region for the project
• Provide an easier way to adjust the resource balance year
• Allow user to select terrain to determine distribution energy intensity
• Revise model default energy intensity values, if appropriate
Ensure Integration with Other CPUC Tools

- Model inputs for the W-E Calculator 2.0 will be consistent with information available from DEER (and eTRM)
- Ensure model outputs are compatible with the CEDARS report structure and the CET Tool
Expand Education and Outreach

- Develop model documentation that is readable and easily understood
- Conduct and record a training session to be posted with the model
- Conduct outreach to water utilities to generate interest
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Task 2. Develop a Revised W-E Calculator

- Develop a memo of proposed changes to the W-E Calculator for approval by CPUC
- Develop a conceptual model of the W-E Calculator 2.0
- Review the model defaults for continued relevance and update as needed
- Develop draft W-E Calculator 2.0 and guidance manual
- Beta-test the draft W-E Calculator 2.0 and guidance manual with energy IOUs and consultants and provide a help desk during testing
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Task 3. Finalize the W-E Calculator and Guidance

- Revise and finalize project deliverables
  1. W-E Calculator 2.0
  2. Guidance manual for W-E Calculator 2.0 and other training materials
  3. Project report
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## Project Schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>Task Description</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
<td>Develop workplan by interviewing stakeholder and identifying issues</td>
<td>Spring 2021</td>
</tr>
<tr>
<td>Task 2</td>
<td>Develop draft calculator and guidance manual</td>
<td>Fall 2021</td>
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<tr>
<td>Task 3</td>
<td>Finalize calculator and documentation (guidance manual and project report)</td>
<td>Winter 2021/2022</td>
</tr>
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Next Steps: Provide Comments on the Draft Workplan

The draft workplan is available for review and comment through March 24, 2021 at the CPUC Public Document Area:

https://pda.energydataweb.com/#!/documents/2478/view
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