

***Minutes for CALMAC Website Committee Conference Call***  
***Wednesday, May 12, 2021, 2:00 PM PDT***

**Attendees:**

Lauren Garcia – PG&E  
Cynthia Rogers – CEC  
Dan Hudgins – SDG&E  
Kim Sides - SoCalGas  
Reggie Wilkins – SCE  
Mona Dzvova – CPUC  
Tim Caulfield – Caulfield Consulting (Website Administrator)  
Jeff Yip – Third Strand (Web specialist)

**Absent:**

Kelvin Valenzuela - SDG&E

**Executive Summary**

The CALMAC Website Committee held a regularly scheduled conference call to review progress on the CALMAC Website Maintenance and Weather File Automation project. The project has achieved proof of concept with regards to weather file automation, and is progressing at the expected rate toward implementation. The next conference call will be on July 14, 2021 at 2:00 PM PDT.

**Discussion Summary**

The attached presentation was delivered by Tim Caulfield, with the assistance of Jeff Yip and Lauren Garcia. It summarizes the state of project to date.

The only question concerned the how the automated system would be calibrated to be sure it reflects prior practices for the creation of the weather files. Tim Caulfield and Jeff Yip responded that once the automated process for the creation of the weather files had been substantially completed, weather files for 2019 and 2020 would be created using the automated system and then would be compared to the files created under the prior process used by White Box Technologies. It was stated that little variation, if any, was expected because the automated system is essentially the same code in both cases.

The conference call was ended approximately 2:31 PM PST. The next call is scheduled for July 14<sup>th</sup>, 2021, at 2 PM PDT.



# **CALMAC Maintenance and Weather File Creation Project**

## **Status Report to CALMAC Website Committee**

May 12, 2021



# Primary Project Structure

- Task 1 – Management and Maintenance of CALMAC Website
- Task 2 – Administration of the CALMAC Website Committee
- Task 3 – Creation, Automation and Posting of California Weather Files
- Task 4 – Host Updates of the California Weather Reference Files



# Maintenance of CALMAC.org and Website Committee Support Tasks 1 and 2

- These tasks are a continuation of the project that has been going on since CALMAC.org was taken over by the CALMAC Website Committee in 2000.
- **Tasks completed from January 2021 through April 2021:**
  - Posted reports and monitored website; hosted website.
  - Third Strand created parallel website based on updated server software; automated backup/maintenance setup.
  - Third Strand created a platform on the new website for hosting the software for the creation of weather files.
  - Third Strand set up new server analytics/tracking system.
  - Facilitated CALMAC Website Committee calls.
  - These tasks run for the duration of the contract.



## (Slide from PI Meeting Presentation)

### Create, Automate and Host Weather Files Tasks 3 and 4

- This is the new portion of the CALMAC project.
- The objective is to “automate” the process of creating and posting of the weather files needed by California evaluators.
- There is considerable uncertainty about how successfully the team can automate the process of creating the weather files. This is meticulous work and often requires judgement and expertise that is difficult to automate.
- The Project Team will work on a best efforts basis to set up a file creation process that can be reproduced accurately and reliably, but complete success is far from guaranteed.



# Project Steps – Task 3.1 and 3.2

## Move code to web and validate

- ▶ Task 3.1 – Move the current White Box Technologies code for creation of weather files to the web
  - ▶ Create a Web-based platform - **Complete**
  - ▶ Transfer the White Box Technology to the platform – **95% Complete**
  - ▶ Study the current code and attempt to automate the processes – **75% Complete**
  - ▶ Adapt the computer code as necessary to work in the web environment – **75% Complete**
- ▶ Task 3.2 – Validate the Code
  - ▶ Create weather files using the web based code – **50% Complete, weather files can be created, programming to smooth out the file creation still underway.**
  - ▶ Confirm that the web based code produces the same results as the files previously produced by White Box Technologies – **50% Complete – the weather files are created using the same software used previously, it is simply done on the web. Checks will continue as process is refined.**






# Project Steps – Task 3.3 and 3.4

## Adapt code to web and Annotate

- Task 3.3 – Adapt Software to Automate Processes
  - Review results of Task 3.1 and 3.2 with CALMAC Project Manager and Website Committee. **Today's discussion constitutes this review.**
  - Refine and adapt software to automate the process for creation of weather files. **20% Complete.**
  - Minimize the time and subject matter expertise needed to operate the software and clean its output. **40% Complete.**
  - “The level of “automation” that will be possible with the budget of this contract will be determined by the Statewide Project Manager and/or the CALMAC Website Committee.” [quote from the contract language.] **Proof of concept has now been accomplished! The project team believes the process can mostly be automated.**
- Task 3.4 - Annotate the code developed and approved in Task 3.3 so that routines and subroutines can be reviewed by CPUC. Note: Confidentiality of proprietary software is an essential element of this review. **20% Complete**



# Project Steps – Task 3.5, 3.6, 3.7 and 4

## Make the Weather Files Available

- ▶ Task 3.5 – Develop a web interface for the creation of the weather files. **0% Complete**
- ▶ Task 3.6 – Modify the code to use National Renewable Energy Laboratory (NREL) radiation data to create annual weather files based on actual radiance data, rather than modeled data. **0% Complete**
- ▶ Task 3.7 – To the extent possible, create an Applications Programming Interface (API) to facilitate the ease of downloading the weather files by users. **0% Complete**
- ▶ Task 4 – Host the weather files and download applications on CALMAC.org to make monthly and annual files available to the evaluation community. **80% Complete – The weather files are already hosted on the CALMAC website. The new version of the website is setup to host the software. Note: The new weather files will not be in a monthly format, but will simply be year-to-date files to the last date the file was created.**





# Project Specifics



- Contract Duration – January 2021 through December 2022.
- Total funding – \$195,000
  - Task 1 – Management and Maintenance of Website - \$70,000 (**26% expended as of April 30<sup>th</sup>. Percent expenditure high due to rebuild of site for new server ware.**)
  - Task 2 – Administration of Website Committee - \$25,000 (**0% expenditure as of 4/30**)
  - Task 3 – Development and deployment of weather code - \$80,000 (**44% expenditure as of 4/30. Spending commensurate with progress to date.**)
  - Task 4 – Maintenance and hosting of weather files - \$20,000 (**0% expenditure as of 4/30**)
  - Breakdown variable depending on how project develops



Questions?

