



7490 Jurupa Ave.
Riverside, Ca. 92504

To Whom It May Concern,

Pacific Energy would like to formally request a cure period for their custom energy technology grant. We would like to request to adjust the due date for milestone #1 to February 12th 2016. Since the second milestone requires three months to complete this would push the due date for milestone #2 to May 20th 2016.

The grant work was delayed for two main reasons:

1. Loss of Engineering Staff

During the early stage of programming the project one of the engineers, Jon Nichols, left the company for another job offer. This left a large gap in the project since Pacific Energy is a small company. The other engineer on the project had to shoulder his load while the search for a replacement was conducted. Eventually, David Kim, an electrical engineer with over 30 years of experience creating PCBs and doing embedded programming was added to the project. David worked to continue where Jon had left off, and is responsible for creating the microcontroller board being used to control the energy storage. He is also in charge of the bulk of the embedded programming.

2. Unresponsive Power Electronics Vendor

In the original grant POWEREX was listed as the vendor for the power electronics stack that make up the bidirectional inverter used to control the energy storage. POWEREX was contacted and a prototype was ordered. However, after a couple months of unresponsiveness and still no delivery the PO was canceled and we began to look for another vendor. Eventually SEMIKRON was chosen.

In the fields of modules & systems, SEMIKRON defines the international power electronics market. SEMIKRON produces power electronics components and systems primarily in the medium output range (approx. 2 kW up to 10 MW). They are packaging specialists. They offer a broad product portfolio, ranging from chips, discrete, diode, thyristor and IGBT power modules all the way to systems and stacks. We have also found their support and speed to be excellent.

The module has now been built using SEMIKRON IGBT stacks and is currently being used for testing at the Pacific Energy R&D lab.

The project was delayed for the above two reasons, however Pacific Energy has worked to correct the above issues and would like to continue to work with RPU to deliver a high quality, reliable energy storage system.

Sincerely,
Zachariah Taylor