

From: Richard Kahn <[REDACTED]>
To: "jeffrey E." <jeevacation@gmail.com>
Subject: Fwd: GSJ Aquion status
Date: Fri, 07 Sep 2018 18:29:52 +0000

Richard Kahn
HBRK Associates Inc.



Begin forwarded message:

From: Brian Prosolar <[REDACTED]>
Subject: GSJ Aquion status
Date: July 13, 2018 at 9:04:42 AM EDT
To: Richard Kahn <[REDACTED]>, Brad Spernak <[REDACTED]>, Kevin Prosolar <[REDACTED]>

Morning Richard,

In the body of this email is the outline and result of Dan's efforts.
This should provide a base for our discussion at 10.

See below

Good afternoon all, sorry for the delay my email had an issue and became unlinked so I wasn't receiving these until now. Regarding GSJ here is what's been achieved.

-All Aquion battery modules are wired to bypass the corroded, water damaged circuit boards that could interfere with charging profiles.

-Sunny Islands (6) were downgraded to firmware version 6.0.02. This was done to allow a broader, linear charge profile to be set

-Charging parameters are now based on voltage set points rather than state of charge calculations done internally with different references.

-Max charge voltage has been set to 58.5V and the batteries will not stop charging until a voltage 1.5V over the set limit is achieved for 15 seconds. This gives them the ability to surpass the previous charge voltage of 56.7V

- The main issue causing the down time was;

A target charge voltage that matched the Aquion batteries was not possible with the previous profile Compounding that was faulty Aquion circuit boards preventing the batteries from properly charging to a suitable voltage

Aquion, as we know, is no more, so it's impossible to obtain replacement parts.

Aquion's Battery Management System (BMS) never met the as advertised performance and created more issues than we could have imagined.

In short, the change I made allowed for a higher, more suitable battery voltage to be achieved and prevents the premature shut down we saw before.

Again, sorry for the delay, hope all is well

Thanks

Dan Chrisman
Prosolar America.Llc
Senior Technical Specialist
[REDACTED]

Regards,

Brian Walden
Prosolar America, Llc
Director of Operations
[REDACTED]