

SUNNOVATIONS

INSTALLER PARTNER

NEWSLETTER

FROM THE CEO:

This month we focus on two operational/technical issues: single vs. dual tank configurations and a new system fill procedure that we recommend. The former topic and our recommendation may or may be controversial. A simple decision rule that we'd propose in connection to this issue: if the existing tank is more than 10 years old, replace it. Let us know what you think.



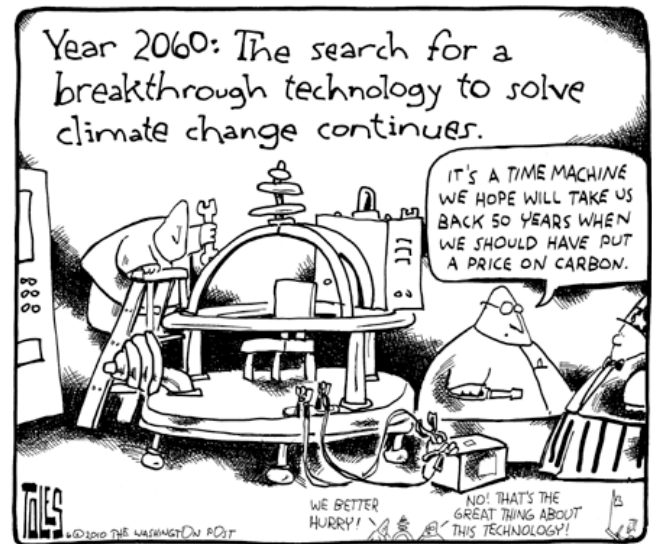
ONE OR TWO?

THE CASE FOR A SINGLE-TANK SOLUTION

One item of discussion we hear from Installer Partners is whether a single or dual tank solution is preferable. The most common answer we hear is: "it depends." However, we think that the better answer is more likely: "a single tank." In summary, a single tank can provide the same heating performance, with less of a footprint and at less cost than a dual tank setup.

The main concern we hear is whether a single tank is able to supply enough hot water during no-sun periods. The answer is yes. The 75 gallon Bradford White gas-powered tank that is available through Sunnovations' Purchasing Consortium has a first hour rating of 61,000 BTU/hr – guaranteeing there is always plenty of hot water.

The electric-backup Bradford White tank has dual, 4500 watt elements in the top and bottom of the tank with a separate thermostat cleverly placed in the middle. This configuration will guarantee there is always hot water, while at the same time does not use any electricity if there is solar heating available.



It is noteworthy that the heating and 1 hour re-refresh ratings in the Bradford White tanks are nearly exactly the same as those in conventional (non-solar) tanks... in other words, any myths surrounding the availability (or lack thereof) of hot water in a solar system are incorrect. The non-solar heating performance is no different than the tank the homeowner previously had!

Then there is the issue of cost and footprint. The latter issue is obvious; taking up less space is preferable. But what we seldom hear discussed is the fact that in a one-tank solution, the solar system replaces a tank that often needed replacement anyway. In other words, the customer is only paying the incremental cost of the solar hot water system: the \$1000 (likely more) that they would have had to pay otherwise to replace an old tank should be deducted when considering the real cost and payback of going solar.

There is another important reason to choose a single tank setup: avoiding dual tank heat losses. It is not so bad if we lose 5000 BTU overnight from free, solar-heated water – but it is very wasteful if TWO tanks are losing this energy. Our nation's 100+ million residential water heaters are wasting over 54 TWh per year... we need 18(!) 500 MW power plants just to keep up with the thermal losses from them! Yet another powerful reason to get your customers to switch to solar water heating!

OUR NEW & PREFERRED FILL METHOD: USING A CHARGE PUMP AT TANK LEVEL

Feedback from Installer Partners shows that you are generally pleased with the Sunnovations installation procedure. But we did get some questions about the fill method on the roof using a vacuum pump. We listened and have adopted an easier and more familiar fill method: using a charge pump at the tank.

The feedback was valid: our earlier recommendation - to hoist 5 gallons of water/glycol mix to the top of the roof and fill there - proved to be a bit of a hassle plus there isn't a good place to place the container (most roofs not being particularly flat places!). This "old" method also required a vacuum pump, which is often not part of the standard toolkit for solar installers. Lastly, achieving the correct fill level could be a bit unclear and time consuming.



While the old procedure still does the job, we are now recommending a new fill method – and it actually is easier, faster and more effective. The detailed procedure is described in Section 5.2a of the updated Installation Manual. The updated Manual also has more photos on how to install the overflow reservoir. The new Manual can be downloaded via the below link – which we strongly recommend doing so.

In a nutshell, the new fill procedure is as follows:

1. Connect a charge pump to the valve at the bottom tank assembly.
 2. Charge the system until it is full (when fluid exits from the pump needle valve)
 3. Drain exactly 1 gallon to get the correct fill level.
- ONLY after completing the fill procedure should the overflow reservoir be connected (to avoid filling the overflow reservoir with fluid during the fill process). The system will automatically produce a strong vacuum the next sunny day.

Our ongoing goal is to make the Sunnovations system the easiest and fastest SHW system to install. Please make sure to email (any) problems, questions and suggestions to: Tech_Support@sunnovations.com or to Arnoud directly. We will listen and follow up.

The latest version of Sunnovations' Installation Manual can be downloaded via this link:

http://www.sunnovations.com/Docs/Sunnovations_Installation_Manual.pdf