



STATE OF WASHINGTON  
DEPARTMENT OF ENTERPRISE SERVICES  
1500 Jefferson, Olympia, WA 98504

**Washington State Building Code Council**  
*Improving the built environment by promoting health, safety and welfare*

**SUMMARY MEETING MINUTES  
OF  
SOLAR PV TAG**

**LOCATION:** Federal Way City Hall  
Federal Way, Washington

**MEETING DATE:** April 19, 2013

Agenda Items	Committee Actions/Discussion
1. Welcome and Introductions	<p>Meeting called to order at 10:00 a.m.</p> <p><u>Members in Attendance:</u> Dave Kokot, TAG Chair; Chris Herman; Dana Brandt; Dave Kozin; Grace Allen-Steuart; Hank Teran; Jeff Randall; John Westfall; Kirk Haffner; Mike Nelson; Perry Spring; Tom Maloney</p> <p><u>Staff In Attendance:</u> Tim Nogler, Joanne McCaughan</p> <p><u>Visitors:</u> Shawn Shepherd, Tim Stearns</p> <p>A quorum was not present at the beginning of the meeting.</p>
2. Review and Approve Agenda	<p>The agenda was reviewed and approved as written. <b>Dave Kokot</b> reminded the group that we would be hearing from Tim Stearns of the Dept. of Commerce regarding information on the Evergreen State Solar Partnership project.</p>
3. Review Meeting Minutes	
4. Tim Stearns-Evergreen State Solar Partnership	<p><b>Tim Stearns</b> of Dept. of Commerce shared a slideshow on Standardizing and Simplifying Solar Red Tape. He encouraged the group to send questions to him and he will respond by e-mail.</p> <p>A brief discussion followed regarding wind technology for residential. It is still not ready for that application, more research and development would need to be done.</p>

	<p>A quorum is now present in the group. (Who joined?)</p>
<p>5. Comments/Develop Final Language</p>	<p><b>Dave Kokot</b> discussed the public comment process, and that written comment is also encouraged. An organized presentation is helpful to the decision makers. SBCC is looking at all of its processes and improving them at this time. This TAG will take the opportunity to initiate the comments to be presented in an organized way. We want to hear all issues and concerns, but must be mindful of time allotted for all speakers. Repeat testimony is not helpful. It can just be noted that one speaker supports earlier testimony if appropriate.</p> <p>Today there are not many present. Rebuttal testimony is not appropriate once the individual testimony has been presented. However, follow up in writing is acceptable.</p> <p>A question about the process for review of the seven proposals was raised. <b>Dave Kokot</b> noted there are several routes we could take. He then stated we can review the language in the code to see where the proposals differ and review those sections.</p> <p>There has been concern from some who indicate their concerns have not been heard. However, all meetings of the TAGs and the Council are considered public meetings. It is important for concerns to be brought out in the process, so the Council can make the most informed decision.</p> <p>A question about when homeowners can be heard was raised as May 3 is the last meeting. We could continue with one more year of non-adoption of Fire Code language if we do not come to consensus on language, or if the Council does not identify any alternative.</p> <p><b>Jeff Randall</b> asked about the IRC and IBC and their relationship to the IFC. <b>Tom Maloney</b> explained how the various codes are separate from each other. We have adopted IRC and IBC as written. They would only change next year if we felt there was a need to make them compatible.</p> <p><b>Shawn Shepherd</b> stated that the solar industry should challenge IRC and IBC to take on the question of ventilation, as Oregon has done.</p> <p><b>Jeff Randall</b> noted it is almost like the solar ready house</p>

	idea. They may want to have a proposal for next year. It should come from the industry to meet their needs.
a. IRC	
b. IBC	
c. IFC Public Comment	<p><b>Luke Carpenter</b> with Bainbridge Fire commented regarding operational concerns. The need for ventilation and the safety of residents and firefighters. Fire movement is affected by location of ventilation opening. The size is also a consideration; four by four is the minimum size. There are several variables such as: the seat of the fire, weather, wind direction, roof access consideration, and pitch. Other factors need to also be taken into account. With this many variables, quick decisions need to be made for life safety.</p> <p>The need to be able to access any portion of any roof; where there are panels present they need to have a path to that portion of the roof. Alternatively, as a <b>FM?</b> the sprinklers are proven to be a life saving tool. Use those in conjunction with solar panels. The ability to minimize the destruction is proven with sprinklers. The bottom line is that they need a route through the array.</p> <p><b>John Westfall</b> noted that not all fire departments are able to train for or expect vertical ventilation to be performed.</p> <p>A question rose about cost of sprinklers. In Bainbridge they are required under city ordinance. Estimates are about \$2.50 per square foot. It depends on many variables and local requirements.</p> <p><b>Luke Carpenter</b> explained the timing of sprinklers versus arrival of the fire fighter response team. Fires contained in the incipient stage reduces damage to the structure and helps prevent fire fighter injuries.</p> <p>A question was raised about roof pitch and how that is determined in regard to ventilation options. It is a judgment call was the answer given.</p> <p><b>Jeff Randall</b> noted the details of fire response is important to be understood. About half of the fires on Bainbridge (8) would require ventilation or prep for ventilation....some fire departments are more aggressive. It depends on conditions, equipment available, and how</p>

many fire fighters are present.

Another question was raised about a hypothetical fire where there are solar panels on the south roof. **Luke Carpenter** noted that he has worked with the installers to be sure that the installation is appropriate. He explained how the ladders are placed. There is some vulnerability to the panels, and concern about energizing the ladder. It would be a minimum of one foot in his jurisdiction for the ladder presentation.

The next question was about sprinklers and whether they should be in all buildings. It was commented that that would be ideal as geographic response times are sometimes as long as 10 minutes.

The TAG asked about pre-engineered light weight truss systems, which is very light weight construction. Fire departments operate on the principle that if the fire is in the attic, it is not tenable to fight that fire.

They then asked if a fire team would ever use vertical ventilation if the fire has not reached the attic. The answer given is yes; to allow the fire gases to come out. It is a judgment call, depending on where the smoke is coming out and the quality (**quantity??**) of the smoke.

**Tom Maloney** noted that every fire is different, fires act differently depending on the contents of the home

The TAG is looking for some commonalities, some standards that have been developed. For example, California has certain pathways established. We need to balance the needs of fire fighters and the solar industry. We should note the differences between the two industries in California and Washington, which are commercial primarily.

There were questions about 'Repowering Bainbridge'; community funding of projects. Has the fire service been involved? The response given is: up to now, no. There has been some discussion of specific projects with developers but not with the organization.

**Mike Nelson** asked about ladder access on a specific building. When the building is sprinklered, it is not a problem.

	<p><b>Tim Nogler</b> told the group he would be representing SBCC at ICC. He will be supporting referral to the electrical code. Another proposal will be to add the provisions to the IRC from the IFC; an opposite proposal is also being considered to exempt IRC buildings. He is looking to coordinate with any other TAG members who will be in Dallas.</p>
<p>Lunch Break 12:10 to 12:40 p.m.</p>	
<p>IFC (continued)??</p>	<p><b>Hank Teran</b> proposal: Alternate Methods 104.9 is cited. There is an exception for sprinklered residential occupancies. A question is raised about 'existing' and whether it refers to solar arrays. No, it is for the existing construction.</p> <p>Another question about reference to alternate methods; are there prescriptive parts of the code as well? <b>Shawn Shepherd</b> said it is allowed for consideration, this is better than in the appendix section. <b>Hank Teran</b> noted the industry is evolving, and using alternate methods is very useful for getting designs approved. <b>Tom Maloney</b> stated that authority for making these decisions is at the local level. It depends on the jurisdiction and their plan review. In Marysville they are trying to approve these projects. It may not work to find language that is agreeable to everyone. It is helpful to clarify this in an interpretation from SBCC. It is a question of how it is permitted. <b>Tom</b> believes that he should be able to work with the industry to make their projects work. <b>Hank</b> noted they are trying to make it work. <b>Chris Herman</b> feels that it is easier if they would never have to talk to the local officials; if he could just know what would be approved. <b>Tom</b> believes that the outcome would be exactly what they are looking for.</p> <p>The deadload on the roof has to remain safe. <b>Dana Brandt</b> wanted to clarify that the language would remain the same, but just offer a reminder that they can use the alternate methods. <b>Hank Teran</b> notes it would allow these with no restriction if sprinklers are included. <b>Hank</b> indicated it is to allow the flexibility. Clear guidance for the code official is needed.</p> <p>There was a question about the Oregon code and how this proposal is related. <b>Dave Kokot</b> notes that by the end of the day we will not be able to get there. We don't</p>

have the training for all performance based. The code needs to evolve more to allow for development of the industry and knowledge of the local officials. Having the wording up front to note the changes and the allowance for alternative methods is important.

**Dave Kokot** is willing to use **Hank Teran's** proposal as a base. **Tom Maloney** feels we should be able to put together a plan review outline, a checklist for consensus, and provide it to the industry. **Tim Nogler** noted that in the 80's the codes were going toward performance for energy, but they had to pull back to prescriptive, now it is swinging back.

**Shawn Shepherd** talked about the California code and when they do prescriptive, but with solar it is stated to do the alternative methods and materials. ICC struck it down, but it still carries in California.

Louisiana (**LA s/b CA?**) code notes that not all roofs are the same, some of their requirements are less strict than others. It is a good approach to allow for alternative means and methods; in some parts of the city, there are certain exemptions. Seattle writes their own code, and there were no permits for solar there up to a point.

**Dave Kokot** states it is a slightly different concept than what we anticipated. We will review the other proposals; it will be a combination of many of these that offers a solution.

**Jeff Randall** indicated it is helpful to have **Hank Teran's** view on this and finds it very useful. The TAG needs to go through all of them, to get the best solution.

There is consensus that the paragraph from **Hank Teran** is very helpful and should be included. There is probably consensus on sprinklers.

**John Westfall** asked about the experience of industry on the various provisions in different jurisdictions. Some prescriptive standards allow for predictability and they do want some predictability. **Jeff Randall** notes they do need to be familiar with the fire code officials, and work with them to allow for adequate ventilation and access. **Dave Kokot** stated when prescriptive is included, it is the minimum requirements. **Perry Spring** noted that

performance standards are how we get to certain (environmental?) solutions. It has value, and the code should reflect that. **Dana Brandt** said that the prescriptive restrictions in the IFC are too harsh; it will require him to have constant contact. **John Westfall** stated that there is an acceptable range of solutions. A few clear minimums would be helpful.

**Westfall/Steuart** proposal was reviewed. They reserve existing requirements from IFC and there are no issues known on commercial installation. The issue is with residential. **John Westfall** talked about the need for and use of appendices for various reasons. There are unique situations for each jurisdiction, e.g., ventilation requirements are dependent on the local jurisdictions.

This proposal clarifies Group U exemption. There was discussion about fire code official for consistency. Building code requirements; spelled out the sprinkler issue more specifically.

**Hank Teran** is clarifying that there might not need to be an exemption or alternate means, if these are already listed as allowable. This language helps the installers. This approach anticipates submittal documents include a checklist. There is an understanding ahead of time about the access plan needed for ventilation, etc.

**Dave Kokot** feels this allows the locals to create their own requirements, prescriptively regarding ventilation, etc. or not.... They can still go to an alternative method and look at other references to allow for approval. Allows for the unique needs of the local jurisdiction in their implementation of the codes.

Brief discussion about training options on code changes.

**Dave Kokot** notes we will complete the review of proposals at the next meeting. We should be trying to meld the proposals and expect to try to reach consensus. Homework has to come together for a master document, with all of the acceptable options as seen in the current proposals. We will look for consensus on each section at the next meeting. **Jeff Randall** starts with **John Westfall** and **Hank Teran's** submittals. **Jeff** has questions about how to document their review of plans and submittals. Are there areas of exemption that could be included?

	<p>Some jurisdictions do have exemptions for the review process, allow for over the counter.</p> <p><b>Shawn Shepherd</b> asked how close the Solar Partnership elements are to the California permit standards, as some of the permitting comes from that. <b>Tim Nogler</b> noted that he can share what he has and would like a second page of criteria...</p> <p>If we are looking at fire permits, expedited or not, the key is to minimize the amount of time that needs to be spent with the code official and allow for streamlining the permit process.</p>
6. Economic Impact Report Requirements	<p><b>Dave Kokot</b> states we need to move through the agenda, and we have to look at the economic impact and analysis. We will have the committee look at this. It is not up to one staff person to provide this information. We need supporting information. What are the cost impacts when we adopt the code amendments? This information needs to be developed based on our proposal(s). SBCC staff will work on the draft with TAG Chair. We will need information from TAG members to develop the analysis.</p>
7. Other Business	
8. May 3 Meeting Discussion	<p><b>Dave Kokot</b> reminded the group that time is short. We can develop proposals for consensus at the May 3 meeting. We will use some language from <b>Hank Teran's</b> and <b>John Westfall's</b> proposals to create a working draft. We will pull more into the discussion over the next couple of weeks.</p>
9. Adjourn	The meeting was adjourned at 2:02 p.m.