

Regulatory Advisory Panel (RAP)
Small Renewable Combustion Energy Permit by Rule
April 12, 2011 Meeting
Meeting Notes

Location: DEQ Piedmont Regional Office
Glen Allen, VA 23060

Start: 9:39 a.m. (pre-meeting)/10:40 a.m. (RAP Meeting)

End: 4:05pm

RAP Leader/Facilitator: Carol Wampler, DEQ

Recorder: Debra Miller, DEQ

RAP Members Present:

Tom Smith, DCR	Lynne Rhode, Troutman Sanders
Ray Fernald, DGIF	Robert Greene, Ingenco
Roger Kirchen, DHR	Donna Wirick, Recast
Ron Jenkins, DOF	Thomas Numbers, ERM
Robin Jones, DMME	Randy Bush, Virginia Forest Products Association
Stephen Versen, VDACS	Nikki Rovner, TNC
Rebekah Remick, DEQ	Al Weed, Public Policy Virginia
Kathryn Perszyk, DEQ	Larry Land, VACO
Emil Avram, Dominion (Alt)	
Ron Jefferson, APCO (Alt)	
John Hart, AEC Idom	Tom Banks, VA Farm Bureau
Kelly Bonds, Aegis	

RAP Members Absent:

Scott Sklar, Stella Group
Bob Bisha, Dominion (Alternate Present)

Guests and Public Attendees:

Cindy Berndt, DEQ	Salud Layton, Dominion
Kerri Nicholas, OAG	Ralston King, Covanta
Patty Buonvini, DEQ	John English, English
Scott Kudlas, DEQ	Dan Wilson, Wilson Engineering
Brenda Wynn, DEQ	
Charlie Becker, DOF	

Agenda Item: Pre-Meeting Overview for RAP Members New to Process

Discussion Leader: Carol Wampler

Discussion: The pre-meeting overview commenced at 9:39am. Carol Wampler, facilitator to the RAP, welcomed those attending the pre-meeting. She then provided background information and an overview of the 2009 statute (Chapter 808 of the Acts of Assembly of 2009). The definition of small renewable energy project as provided in the statute was reviewed. A question on the definition regarding how does steam fit into the scheme when it is co-produced with electricity was asked, and it was noted that those questions are being considered and the agency will be seeking input from the RAP and OAG on this and similar types of issues. Carol then briefed the attendees on the solar proposed regulation that is currently in executive review, explaining that the draft Solar PBR may provide a model from which the Combustion RAP might work.

Regulatory Advisory Panel (RAP)
Small Renewable Combustion Energy Permit by Rule
April 12, 2011 Meeting
Meeting Notes



Carol Wampler
Overview for Apr 12 :

Agenda Item: Welcome, Introductions, & Overview

Discussion Leader: Carol Wampler, DEQ

Discussion: Carol welcomed all and asked everyone to introduce themselves. Each RAP member introduced themselves, providing their affiliation and interest in the Combustion PBR. Members of the public then introduced themselves.

Agenda Item: Requirements of APA and FOIA

Discussion Leader: Cindy Berndt, DEQ

Discussion: The regulatory process was reviewed and it was noted that the average time to complete a regulatory action is 18 to 24 months. It was noted that during the RAP process, consensus is sought and that consensus recommendations by the RAP will most likely be deferred to by the Director unless legal issues prohibit the recommendation. The group was informed that this RAP is a public body and as such its meetings are governed by our public participation guidelines and FOIA (i.e., properly noticed, open to public, minutes taken, etc). The group was reminded to be cautious with emails and to never hit "reply all." Carol, as the facilitator, may send email to the entire RAP, but no one else is to do so. There is no fine line from the FOIA council regarding electronic communication and when it may be considered a meeting of the RAP, and if emails are going back and forth it could be deemed a meeting. If there is information that you wish to have the entire group to have, then send it to Carol and she will send to everyone. The provisions for electronic meetings were reviewed and it was noted that agency will take care of all of the FOIA responsibilities for the group. These RAP guidelines were sent to the group electronically. The bottom-line message to RAP members was that, to avoid any possible infraction of FOIA rules, no more than two RAP members may discuss RAP business in person, by phone, or by email.

Agenda Item: What Does a Combustion Project Entail?

Presenters: Al Weed, Public Policy Virginia
John English, English Boilers
Dan Wilson, Wilson Engineering Services

Discussion:

Al Weed opened the discussion regarding combustion renewable energy projects and, in particular, biomass. His comments included the following: One of the contentious issues is the definition of biomass, so it would be beneficial if this group can develop a definition of biomass. The speakers will provide information on woody biomass and crops. Questions raised by Mr. Weed's included: What about digestion process that creates burnable gas? Is the digestion process under this PBR or just the burnable gas? What about landfill gas to energy projects? Location, scale and operation are the suggested topics for this group to consider. With location, what is different for combustion projects? Unlike solar or wind, with biomass, the energy source (biomass) can be moved to the location. Location also needs to consider grid access to get the energy to consumers. Road network/railroads nearby are necessary for these projects as well in order to get fuel to plant. What

Regulatory Advisory Panel (RAP)
Small Renewable Combustion Energy Permit by Rule
April 12, 2011 Meeting
Meeting Notes

if you have a facility and wants to do co-generation – is that to be considered? The issue of scale will depend on a lot for energy. Small scale projects margins for profit are thin and for these the use of its thermal output is necessary as well. So for these projects that needs to be considered. For combustion operations, unlike wind and solar, the advantage of biomass is that it can run 24/7 and there is very little difference between biomass combustion facility and other industrial operations. These are not unique impacts to natural resources in the way that wind turbines are to bats, for instance.

Al then introduced the other speakers. John English will talk about the projects with a scale between 5-20 MW and Dan Wilson will discuss those that are under 5 MW

Mr. Wilson started the presentations and focused on 5 MW and below projects. It was noted that these projects are all combined heat and power applications because for this small scale of projects, they need to use the residual heat to make them economically worthwhile. The fuel used is usually a biomass (wood chips, sawgrass, waste biomass, etc.). About ~1% of the fuel will become ash. If the biomass is clean, the ash is a good soil amendment that can be used. Mr. Wilson then went through the combustion process, how these plants are used, types of use (usually near large heat demands - government buildings, schools, industrial facilities, hospitals, etc.). The building that is built to house the biomass plant will look just like any other building at one of these facilities and there are no special threats or issues from these plants.



VADEQ_Under_5MW
_Power_Generation,r

Questions arose again on the thermal aspect of these plants. Are we going to account for the thermal output? How are we going to account for a facility that may produce 1 MW of electricity but also produce a large amount of steam? Carol noted that this is one of the questions that we need to look at, when a project produces both electricity and thermal, how can we do that under or do we need to do that under the PBR? The conversion of thermal energy to MW was discussed and it was noted that the information presented did not consider generation efficiency. The group asked questions on the types of fuel that are used and it was noted that the fuel is usually dependent on the boilers used. There is a new federal regulation that boilers under 100,000,000 BTU/hr are going to have to meet particulate matter standards. It was asked if the PBR will also consider any fuel processing areas (if the facility has one).

John English then presented information on the process used for combustion facilities in the 5MW to 20MW range. He noted that one of the issues is that a lot of plants are competing for the same fuels. This has lead to an increase in green and clean fuels, and for these smaller scale projects that can be a limiting criterion. Many are looking at other types of fuel source. However, EPA's new air rules on the boiler MACT standards are very specific about how they address fuel from biomass. If you generate (wood waste, agriculture crops, etc) and burn, then it is classified as a boiler. But if you bring in the same waste stream from off-site, then it is a solid waste incinerator. Mr. English then explained the size of the facilities and noted that although a 20 MW facility produces more energy, it may not be a large footprint. And these are ordinary buildings, so historic

Regulatory Advisory Panel (RAP)
Small Renewable Combustion Energy Permit by Rule
April 12, 2011 Meeting
Meeting Notes

resources and wildlife impacts are similar to other industrial operations and there are no special concerns for consideration.



What Does a
Combustion Process E

RAP broke for lunch at 12:32pm
RAP reconvened at 1:38pm

Agenda Item: Panel Discussion

Panel: Donna Wirick, Al Weed, John English, Dan Wilson

Discussion: Prior to starting the panel discussion, Carol reviewed some basic principles of statutory construction for these small renewable energy projects. On guiding principle, established during the deliberations of the Wind RAP, is that we should not make it more difficult to permit a renewable-energy facility than to permit other types of development, unless there is a very good reason (e.g., wind turbines' impact on bats – a special, unique impact).

What do combustion projects entail? Donna talked about some of the issues including fuel handling. Is that going to be part of this PBR or not – because it is so diverse in the types of fuels (especially the solid fuel boilers). For many it is actually looking at retro-fitted coal technology for fuel handling, using conveyors, silos, other parts for solid fuel handling. Siting process can be more involved than even the air permitting for these types of facilities (and that can depend on the state). In Pennsylvania, these projects are reviewed by the fish and boat division and historic preservation. In Maryland, due to the migratory bird act, you have to consider construction timeframes as you cannot construct during nesting sessions and stack heights also may be an issue.

Al Weed noted that the states are likely to have stricter requirements on birds but it depends on the state. It was asked if Virginia has another set of wildlife issues other than what is required by the feds? Ray Fernald, DGIF, noted that the feds have similar policy and recommendations as DGIF. Ms. Wirick noted that PSD (prevention of significant deterioration) may get the federal land folks commenting.

It was noted that for a PBR, what is to be implemented for natural resources needs to be stated up front in the regulation and the DGIF and DHR requirements are to be spelled out there. This allows developers to know what is to be required from them for these facilities.

The group then discussed various definitions and topics, including the following comments:

- Information on the Henrico Springfield County Landfill energy project and that it will support about seven (7) engines (2.5 MW facility). It was asked if landfill gas (LFG) fits into our definition under the statute? What do we mean by MSW? Do we mean what we are burning as in the MSW – but does this include LFG?

Regulatory Advisory Panel (RAP)
Small Renewable Combustion Energy Permit by Rule
April 12, 2011 Meeting
Meeting Notes

- Energy from waste is another definition? With the new Boiler MACT and solid waste incinerator rules that definition will be a very big issue.
- What about digesters and thermal conversion issues (pyrolysis, digesters, biological process)?
- When does the project have to have the PBR? A building can be built without a permit from DEQ. So when does it have to have the PBR, when the emission units are put in? It was noted that the emissions will be covered under the Air permit, wastes under waste regulations, and any discharge will be under water regulations. It is the footprint of the building that we are concerned with for the HR and wildlife impacts.
- For these projects, will we be considering truck traffic? It was noted that small renewable energy project is defined by statute. The group should review the solar regulation that provides a definition of site, disturbance zone, and small renewable energy project. It was commented that the fuel for solar and wind is on the site, but in the combustion case, the fuel is brought to the site, so that is different consideration.
- The definitions need to be worked out for combustion but we are assuming that we are not going to include the forest and fields from which the biomass comes. Additionally, some of the concerns, such as traffic, are likely to be handled by the local government process (CUP or other). It was suggested that the PBR should, as much as possible, focus on-site issues, with the traffic/road being handled as a local issue. It was also noted that in most cases, unlike solar and wind, combustion facilities are built on a brownfield area not a greenfield.

Agenda Item: What Existing DEQ Permits Apply to Combustion Projects?

Presenters: Becky Remick, DEQ; Kathryn Perszyk, DEQ; Scott Kudlas, DEQ; Brenda Wynn, DEQ

Discussion: Ms. Remick provided an overview of the Virginia air permitting requirements for these combustion projects and provided an overview of the new biomass energy facility general permit regulation. It was noted that if you build and test a biomass facility under the general permit and if you are deemed a major source, you have to shut down so there is some risk, and facilities need to understand this. The biomass GP is ONLY for new sources. Ms. Remick reviewed the federal requirements for biomass, including the revised definition of solid waste.



Biomass and Air
Permitting - April 12 2

Based on presentation, various questions were asked by the group:

- If you are not a new source and have a permit, you would be a modified source.

Regulatory Advisory Panel (RAP)
Small Renewable Combustion Energy Permit by Rule
April 12, 2011 Meeting
Meeting Notes

- The Air permit will also look at emissions from trucks on the site (loading/unloading) but not emission for trucks during transport to/from the site.
- If a fuel yard is a separate facility, would the air permit consider that? No, the fuel yard is not part of the permit. Would only worry about VOCs unless burning or drying the wood in storage area.
- The type of regulation will depend on the biomass used. It may be under the Boiler MACT or the Commercial and Industrial Solid Waste Incineration standards.
- How does air permitting look at HR and wildlife? Air does not unless it was PSD, which in most cases this would not look at those impacts.
- The issue on why to require these types of facilities to review historic resources and wildlife was discussed.

Kathryn Perszyk then presented the requirements for waste management and permitting to the group.



Solid Waste
Permitting for Combu:

Scott Kudlas and Brenda Wynn then presented the requirements for water permitting to the group. Mr. Kudlas covered the groundwater withdrawal permit requirements and Ms. Wynn provided information on surface water withdrawal.



RAP on Surface
Water Permit By Rule



Groundwater
Withdrawal Permits.p

After discussion by the RAP of these presentations, Carol asked if there were persons who wished to speak during the Public Forum. There being none, she announced that the next Combustion RAP meeting agenda would include discussion of “straw man” provisions. She will work with sister agencies in preparing the “straw man” provisions, much as she did for the Solar RAP. She asked if any other RAP members would like to assist in drafting the “straw man” provisions, and Al Weed volunteered. The date of the next Combustion RAP meeting will be set with the aid of an online Doodle survey.

Carol thanked all speakers for their informative presentations, and RAP members for their participation. The meeting adjourned at 4:05 p.m.