cys to: Ellen
Doug
Bob C

From: James Turdici
To: Jesse Funches
Date: 7/10/01 4:30PM
Subject: Talking Points on Pebble Bed

7/11/01

Jesse.

I have incorporated your comments and the final version is attached I prefer to use this mainly as talking points and not as a public handout Obviously you may desire to share this with the Commissioners.

Jim

CC: Anthony Rossi; Diane Dandois; Glenda Jackson; Peter Rabideau; Richard Borchardt

B/19

Pebble Bed Mod

TOPIC: PEBBLE BED MODULAR REACTOR

STATEMENT OF ISSUE: Exelon has requested that the NRC provide an estimate of the annual fee associated with a Pebble Bed Modular Reactor. The annual fee would be assessed after an operating license is issued.

FACTS BEARING ON THE ISSUE:

✓ Currently, the annual fee for each operating power reactor is determined by dividing the total annual fee amount for the power reactor class by the number of operating power reactor licenses. It still has not been determined whether a separate license will be issued for each Pebble Bed module (up to 10 may be authorized for a site) or whether a single license will include all Pebble Bed modules for a site.

✓ The annual fee is based on the budget for generic and other costs not recovered under 10 CFR Part 170, for a class of license. It is not clear whether the agency generic and other efforts to regulate a Pebble Bed Modular Reactor are significantly different from regulating other types of operating power reactors. If so, how will the regulatory efforts be different and what resources (FTE and contract costs) will be budgeted for these efforts?

✓ The annual fee regulations provide that an annual fee exemption for reactors may be granted taking into consideration each of the following factors: age of the reactor, size of the reactor, number of customers in rate base, net increase in KWh costs for each customer directly related to the annual fee assessed, and any other relevant matter the licensee believes justifies a reduction of the annual fee. It is anticipated that each PBMR module will be approximately 300-450 MWt. Therefore, consideration could be given to the agency policies in granting prior exemptions to smaller, older, unique *operating* reactors. These exemptions include the following:

Plant	Annual Fee Exemption	MWt	Basis	Date Shut Down
Before OBRA-90 / 100% fee recovery				
Shoreham Unit 1	Full exemption per 4/1/87 SRM for SECY-87-39	2436	limited to 5% power	6/28/89
Ft St Vrain	Partial exemption per 7/24/87 SRM for SECY-87-166 (Annual fee = 22.2% based on 1/3 of 67.3% of cost)	842	Only HTGR; 1/3 size of others; only 67.3 percent of costs applicable	8/18/89

Yankee Rowe	Partial exemption per 4/3/87 SRM for SECY-87-66 (Annual fee = 19% based on ratio of plant's Mwt to average and impact on cost per kwh)	600	Oldest, 1/5 average size, no retail customers; 6 times increase in KWh cost than others; more sensitive to increasing costs; less potential hazard due to design and remote siting; many generic costs not applicable due to older design	10/1/91
Big Rock Point	Partial exemption per 4/3/87 SRM for SECY-87-66 (Annual fee = 9% based on ratio of plant's Mwt to average and impact on cost per kwh)	240	One of the oldest (oldest GE BWR), 1/10 average size (second smallest); 12 times increase in KWh cost than others; more sensitive to increasing costs; less potential hazard due to simpler design, remote siting/rural location; many generic costs not applicable due to older design	8/97
LaCrosse	Partial exemption per 4/3/87 SRM for SECY-87-66 (Annual fee = 6% based on ratio of plant's Mwt to average and impact on cost per kwh)	165	One of four oldest; smallest; customer base less than others; 15-20 times increase in KWh costs than others; built by AEC as demo plant; could be forced to rely on coal; more sensitive to increasing costs; less potential hazard due to design, historically less regulatory attention	4/30/87
After OBRA-90 was effective[1]				
Yankee Rowe	Partial exemption per 6/26/91SRM for SECY-91-179 (Annual fee = 19%)	600	Same as previous	10/1/91
Big Rock Point	Partial exemption per 6/26/91 SRM for SECY-91-179 (Annual fee = 9%)	240	Same as previous	8/97

[1] Shoreham and Ft. St. Vrain were also exempted from annual fees after OBRA-90, but these exemptions were based on Orders issued in 1990 that effectively shut down the plants

SCENARIOS:

The following illustrate what could happen to annual fees based on conditions presented.

Scenario A.

If a single PBMR license is issued for the site (potentially up to ten modules on a single license) and it is determined that the generic and other regulatory efforts for PBMR operating reactors is about the same as for other types of operating power reactors, then the annual fee for the PBMR license could be expected to be about the same as the annual fee for the other types of operating power reactor licenses.

Scenario B.

If a separate license is issued for each PBMR module (potentially 10 licenses per site) and the regulatory oversight for PBMR is about the same as for other types of operating power reactors, then:

1. *Absent an exemption*

The annual fee for each PBMR license could be expected to be the same as the annual fee for other types of operating power reactor licenses, but the total annual fee for the PBMR site could be up to 10 times the amount for a non-PBMR site that has only one operating reactor. This is no different than the current annual fee policies for operating power reactors: if three separate licenses are issued for three reactors at a site, the total annual fee for the site is three times the amount for a site that has only one reactor and thus one license. However, if the budgeted costs to be recovered through annual fees remained the same under this scenario, then the annual fee for ALL operating power reactor licensees could be expected to decrease because of the increase in the number of licensees paying the costs.

2. *If an exemption is granted*

The annual fee for each PBMR license could be expected to be less than the annual fee for other types of operating power reactor licensees. If the reduced annual fee is determined to be comparable to those previously allowed, the annual fee for each licensed module could be expected to be approximately 10-15% of that of other operating power reactor licenses.

Scenario C.

If it is determined that the generic and other regulatory efforts for PBMR are significantly different from that for other types of operating power reactors, a new fee class could be considered. This would require staff analysis to determine the proper costs to be allocated to the new class. The total annual fee amount for the new class would then be divided by the total number of PBMR licenses to determine the annual fee for each PBMR license. Using this scenario, all of the costs for the new PBMR class would be borne by the PBMR licensees, regardless of the number of licenses.

MWt:	No. of Operating Reactors[1]	No. of Shutdown Reactors	If shutdown, subject to operating reactor annual fee after OBRA-90?
0 - 300	None	8	Big Rock Point - Partial exemption
301 - 600	None	1	Yankee-Rowe - Partial exemption
601 - 1000	None	3	
1001 - 1500	None	1	
1501 - 2000	13	1	Haddem Neck - Full Fee
2001 - 2500	5	2	Millstone 1 - Full Fee
2501 - 3000	34	3	Maine Yankee - Full Fee
3001 - 3500	40	3	Zion 1, Zion 2, Trojan - all Full Fee
3501 - 4000	11	None	

[1] Does not include Browns Ferry Unit 1, which requires Commission approval to restart