From: Cymbalsky, John
Sent: Wednesday, September 28, 2016 3:20 PM
To: Franklin, Peggy (CONTR) <<u>Peggy.Franklin@ee.doe.gov</u>>; Eybs, Mary (CONTR)
<<u>Mary.Eybs@EE.Doe.Gov</u>>
Cc: Exparte Communications <<u>ExparteCommunications@hq.doe.gov</u>>
Subject: FW: September 27, 2016 Meeting with Atlas Copco [I-AMS.FID3644896]

Please place this ex parte memo in the compressors standards docket.

From: Randle, Russell [mailto:russell.randle@squirepb.com]
Sent: Wednesday, September 28, 2016 12:56 PM
To: Cochran, Peter <<u>Peter.Cochran@Hq.Doe.Gov</u>>
Cc: Randle, Russell <<u>russell.randle@squirepb.com</u>>; Kolo, Lacy <<u>lacy.kolo@squirepb.com</u>>; Luc De Beul
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<<u>Mary.Greene@hq.doe.gov</u>>
Subject: September 27, 2016 Meeting with Atlas Copco [I-AMS.FID3644896]

Dear Pete: Attached is another electronic copy of the PowerPoint presentation made by my client, Atlas Copco, at yesterday's meeting by Luc De Beul, Vice President for New Business Technologies. As we discussed prior to and at the meeting, it is expected that these materials, the list of attendees and this summary of our discussion will be put in the public docket.

In addition to Mr. De Beul and me, Atlas Copco was represented by my partner, Lacy Kolo, and by Mr. David Prator, General Manager and Vice President of Atlas Copco Compressors LLC, from Houston. In addition to yourself, the Department of Energy was represented by Mr. John Cymbalsky, Supervisor, Appliance Technical Standards and Building Technologies Program, by Mary B. Greene, Esq., of the Office of General Counsel, yourself, and Mr. James Raba, Energy Technology Program Specialist in the Building Technologies Program. Christopher Bolduc from Lawrence Berkeley National Laboratory and Daniel Weintraub from Navigant Consulting participated by phone.

We appreciate the Department's courtesy in meeting with us to discuss certain aspects of the study submitted with Atlas Copco August comments, specifically data and related analyses of the 30,000 plus compressors explained in that written study. As noted in the presentation, Atlas Copco generally agreed with many CAGI comments as well, and it did not repeat those points in its written comments beyond noting Atlas Copco's agreement.

The key points covered in our presentation, after reviewing critical findings in the data, are that:

- (a) The data show that actual operating hours of compressors per year, particularly the largest compressors, are significantly less that DOE had estimated in formulating its Notice of Proposed Rulemaking, thereby reducing the likely energy savings by large amounts;
- (b) The focus on measuring efficiency at a fixed point and full capacity misses critical energy losses (and potential savings) when the fixed speed machines run at lesser loads, losses largely avoided by variable speed drive (VSD) compressors, underlining the need for test methods and standards to focus not only on efficiency at full capacity, but at lower settings, similar to what is done with automobiles (city driving) and pumps;

- (c) The energy losses from repeated cycling of the oil injected fixed speed screw compressors and turbo compressors are very significant and missed by the proposed rule;
- (d) The approach proposed by Atlas Copco in its comments would address these cycle losses and allow an "apples to apples" comparison, rather than sending false market signals. Those incorrect depictions of efficiency in the proposed rule's approach mistakenly suggest that fixed speed machines are more efficient over the range of operating conditions likely to be encountered than the same sized variable speed drive (VSD) compressors are . Those incorrect efficiency ratings will discourage the adoption of variable speed drive (VSD) compressors, even though VSD machines are shown by the data to be more efficient over the range of operations than are fixed speed compressors, especially in their avoidance of cycle energy losses.

Towards the conclusion of our meeting, we did note Atlas Copco's serious concern about the timing of the test rule implementation, and suggested that it is within the Department's authority to adopt the ISO1217 procedure as the test rule, similar to what EPA has done in certain regulatory contexts. EPA has at times adopted a consensus industry test rule to ease the transition and assist compliance by using a well-understood and accepted test procedure.

Please let me know if you or your colleagues have questions about the matters we presented, or any related questions.

Sincerely,

Russ Randle, Counsel for Atlas Copco



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