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To Whom It May Concern in the Matter of Peter Schwartz.

I offered to write this letter, in support of the promotion of Peter Schwartz, because, it seemed to me, that some of Schwartz's efforts needed further discussion:

Student Research Projects and Publications.

It is my impression that Schwartz has had multiple students work on energy and environment projects over the years, which ultimately were published. Schwartz's resume lists 37 students (or groups of students) that he has worked with, resulting in some eleven publications. This represents a considerable body of work, *far above average*. In 30 years at Cal Poly, I don't think I observed that degree of student research output. It is my impression that Schwartz has done an excellent job of getting students involved in the design of physical devices and the measuring of their performance. These things run in Schwartz's blood, as I observed when co-teaching Physics 310, Physics of Energy. Along the same lines, Schwartz worked diligently with the San Luis Maker Space project, to make hands on shop work accessible to the public. His work with Guateca followed the same pathways. Schwartz is a unique asset to the department in teaching about the physics of energy and energy in society. We need the additional breadth he brings. He should be nurtured to strengthen our offerings in this area.

Experimentation on Physics Education.

We should continue to strive to improve on the ways we teach physics. Many of us obtained our physics education primarily from lectures and recitation sections. Is there a better way to learn physics? By shifting the lectures to his computer-based films, this gives time to class-room applications of the subject matter, in the full class situation, as well as individually and in small groups. It seems reasonable to continue to experiment in this area, which fits in with many of today's students. Schwartz has modified his approach, raising his student evaluations. Does the lecture-based approach make it too easy to be passive learners, pushing learning towards "tellum and testing" memorization?

Conclusion: Schwartz has contributed to the physics department in unique ways, to give the department additional breadth. His accomplishments make it very reasonable to promote him to full professor. I would be glad to chat or email on this issue.

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