ASSOCIATION OF
PUBLIC AND
LAND-GRANT
UNIVERSITIES

To whom it may concern,
6/20/2013

I am intimately familiar with Dr. Leigh Abts' course BioE289 Designing a Sustainable World because it was developed in part under a contact with the Department of Energy for which I have been the Principal Investigator and Leigh is one of two co-PI's. The Department of Energy asked Association of Public Land-grant Universities (APLU) to develop a curricular framework or model curriculum based on the Energy Literacy Principles, and several modules that would begin the process of having shared materials for the greater education community, such as the professors and teachers at the grade 13 level (university, community college, and AP). I asked Leigh to join the effort because of the substantial effort he had made in developing an AP level Introduction to Engineering Design course.

We were convinced that to be successful we needed both a model curriculum and a course that was fundamentally different than any of the Energy 101 courses then being taught. If students were to be introduced both to energy and sustainability they needed to learn basic facts and how to apply them. They needed a mental framework within which to evaluate situations and the tools to come up with sustainable solutions. Department of Energy funds available to us were supplemented by NSF funds which engaged community college faculty who have led to the development of two additional versions.

Dr. Abts' work is innovative in a lot of ways. The course is results-oriented and the ingredients are a design-based course and a flipped classroom. From the very beginning of the course, students chose projects with a sustainable impact, did a design, and refined that design in terms of new knowledge including that gained from lectures and research. The project is the proof of what the student has learned and the e-portfolio remains theirs and can be added to even after the course finishes. Because the course is tied to a model curriculum, it is easy to understand what material is covered and credit is more easily transferable. Sister courses at two Maryland community colleges are beginning this fall with agreement that course credit from them will be transferable to College Park. The College Board has been consulted and their metrics have been built in from the beginning so it should be possible to expand the effort to Advanced Placement when demand for the course is established. A spinoff is already underway in Montgomery County at Wheaton High School, layering Energy 101 applications into an Introduction to Engineering Mathematics Course patterned after another University of Maryland course.

The course is also designed for sustainability both substantively and procedurally. It is based on federally approved energy literacy principles that were developed by the Department

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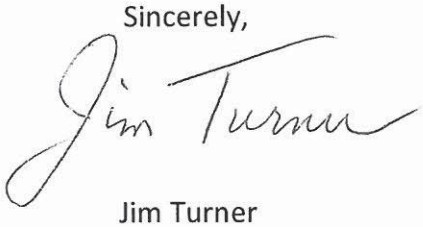
of Energy with the support of the White House Council on Environmental Quality and the input of thousands of experts and commentators from the general public. It is consistent with the model curricular framework developed by Association of Public and Land-grant Universities and Environmental and Energy Study Institute after input from many academics and subject experts. From the beginning we have also considered how to make it available to other schools and in the next phase we hope to partner with associations such as Second Nature and American Indian Higher Education Consortium to teach an updated version of BioE289 as a nationwide flipped course with instructors working with students on projects on many campuses.

Sincerely,



Jim Turner
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Association of Public and Land Grant Universities