

Statement of

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Chairman Corker, Senator Alexander, and Members of the Conference, thank you for the opportunity to speak to you today.

Advanced conversion of sustainably produced biomass is our nation’s most viable near-term, renewable option for producing liquid transportation fuels, holding tremendous potential to loosen – if not break – the stranglehold of foreign oil.

Recent advances in the readiness of cellulosic ethanol technology are allowing us to step beyond the challenges and limits we face with increased use of food and feed crops as a source of energy.

Next generation biofuels technologies are here today, but they are immature and unproven commercially. How can this nascent industry emerge from the current pilot and demonstration phase to achieve commercial scale quantities? More importantly, biofuels—even next generation advanced biofuels—is something we can do right or we can do wrong. How do we ensure that we achieve the profound, positive effects while minimizing and managing risks?

As we ramp up from an infant industry to a mature, sustainable industry, a number of elements must move up that ramp in parallel.

One of the interesting challenges to jump starting a commercially viable non-food advanced biofuels industry is the chicken-and-egg problems tying the production of feedstock to the capital intensive biorefinery. Using switchgrass as an example, today it costs a Tennessee producer about \$300 an acre to get switchgrass established, yet it takes 3 annual growing seasons for that stand to reach full production potential.

We estimate that it will require at least 50,000 acres to support a commercial biorefinery with switchgrass. In Tennessee, that probably represents at least 500 farmers, making a commitment to invest in a perennial crop for 3 years before maturity is reached and the financial payoffs are achieved.

On the other side, the commercial biorefinery, likely to have capital costs in excess of \$200 million, is not likely to be able to obtain financing without a demonstration that sufficient quantities of suitable biomass will be available at startup.

Working on both the chicken and the egg at the same time, Tennessee has made an unparalleled commitment to lead the transition to smart, sustainable growth of this industry, spanning the breadth of farm fields to filling stations. In 2007, Tennessee Governor Bredesen committed more than \$70 million to the Tennessee Biofuels Initiative, a commitment the state has not only maintained, but strengthened by leveraging nearly a quarter billion dollars related to advancing sustainable biofuels through programs at the University of Tennessee and Oak Ridge National Laboratory.

The Tennessee Biofuels Initiative takes a farm-centric approach to feedstock development, working with local farmers to develop a program that provides direct payments to farmers for switchgrass production as well as one-on-one technical assistance through the Ag Extension Service and wide ranging research related to all aspects of the feedstock supply chain.

The Tennessee project also addresses other key challenges for large scale commercialization through construction and operation of a 10% scale biorefinery that allows us to demonstrate and improve conversion technologies and provide assurances to financial markets evaluating risks of investing hundreds of millions of dollars in new biorefinery projects. While our initial focus is on fuel ethanol, the biorefinery also provides important long-term research capacity for co-production of clean, renewable chemicals, products and power.

Still other challenges relate to closing the loop between industrial scale biofuels supply and consumer demand, and providing region-specific solutions for the field to fill-up path, allowing more flexible and sustainable utilization of land and other natural resources.

All of the building blocks are primed, they just need to be assembled to simultaneously address technical and economic challenges in feedstock supply, biorefining, and distribution and use. Opportunities to have a profound effect on accelerating smart commercialization include:

- more funding for basic research, development and demonstration of regionally appropriate and sustainable energy crops;
- more incentives for farmers to bring non-food acreage into sustainable energy crop production;
- sharing the risks of early private financial investments in commercial scale production; and
- more funding for science and technology R&D, including co-products.

Thank you again for the opportunity to appear before you today. This forum is a strong statement about your commitment to finding energy solutions for America, recognizing that a variety of complementary approaches and technologies can all contribute to meeting more of our energy needs from clean, domestic, renewable sources, and advanced biofuels have an important role to play in achieving this worthy goal.