

Testimony of Paul Gardner
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Before the House Committee on Small Business
Subcommittee on Agriculture, Energy and Trade

Hearing on: Climate Action Plan and Impact on Small Business

Thank you Chairman Tipton and Ranking Member Murphy for allowing me the opportunity to testify before your subcommittee regarding President Obama's Climate Action Plan and its impact on Small Business.

My name is Paul Gardner, and I am currently the head of Business Development for Agilis Group. I have spent 25 years in the aerospace industry with a particular focus on the research and development of advanced turbine engines for both flight and power generation applications. I have been with Agilis for the past 16 years.

Agilis is a 20 year old professional engineering services company focused on the technical research and engineering development of turbine engines. Agilis is a Small Business with approximately 130 full time employees, mostly degreed engineers, based in Palm Beach Gardens, Florida. We also have an engineering office in Camden, South Carolina. We currently provide advanced research and development engineering to the turbine original equipment manufacturers in the industrial power generation, oil and gas, military flight, and commercial flight industries.

Since I have been at Agilis, we have developed business relationships and won contracts to support several key clean energy initiatives, including the research and development of high efficiency natural gas engines, clean coal combustion, CO2 sequestration systems, fuel burn reduction and increased fuel efficiency for Air Force and Navy aircraft propulsion systems, turbine power generation from advanced small modular nuclear reactors, catalytic and low-emissions combustion systems, advanced wind turbine gear systems, and turbine power generation from advanced fuel cell systems.

Our business contracts and engineering projects primarily come from private industry. Only a very small percentage of our work comes directly from government agencies and direct government contracts. Agilis wins contracts from the turbine engine companies and provides sub-supplier support to the government contracts these companies have received from the DOE, DOD, NASA and other agencies. Currently, about 40% of our engineering business is as a sub-supplier for government contracts. The other 60% comes from the turbine engine companies' internally funded development efforts.

At Agilis, we believe that the President's Climate Action Plan will have a definite impact on our business. I would like to explain some details of the work we have performed to illustrate how funding of clean energy initiatives, specifically the research and engineering development of clean energy technologies, can provide direct support to Small Businesses like Agilis.

In 2002 and 2003, Agilis provided sub-supplier support to a DOE contract to convert the waste coal dust from a coal fired power plant in Alabama into electricity. The original plant design collected the residual coal dust from the coal fired boiler, compressed and packaged it into transportable blocks and shipped it off to be stored as toxic waste. In support of the DOE contract, Agilis performed the combustion research, engineering design and development of a turbine combustion system that burns the residual coal dust as a fuel for a small industrial gas turbine. The turbine engine now produces enough direct electric power from the coal dust to operate the entire facility.

In 2009, Agilis provided sub-supplier support to a DOE contract to convert the waste heat from a fuel cell system into additional electricity. The fuel cell system used natural gas as a fuel source, but produced a large quantity of residual heat as the fuel cell converted the fuel into electricity. Agilis performed the system design and engineering development of a turbine system that converts the excess heat into work that powers an additional electric motor. The overall efficiency and power output of the fuel cell facility design was increased by 20%.

Since 2009, Agilis has provided sub-supplier support to DOD contracts directly focused on the technical research and engineering development of the next generation fuel efficient turbine engines. These DOD programs include the Navy's Task Force Energy and the Air Force's VAATE (Versatile Affordable Advanced Turbine Engine) initiatives. These programs are directly aligned with the DOD Operational Energy Strategy Implementation Plan, released in March 2012, with a key goal factor to increase fuel efficiency and reduce reliance on foreign oil supply. Since 2009, Agilis has received more than \$5M in engineering contracts from the turbine engine companies to support these programs.

Agilis has provided over \$5M of engineering effort in support of a DOE program to develop advanced compression systems used in the capture and sequestration of CO₂. This effort is in direct support of the President's plan to "cost effectively meet financial and policy goals, including the avoidance, reduction, or sequestration of anthropogenic emissions of greenhouse gases".

Agilis has provided over \$10M of engineering support to develop and implement advanced catalytic combustion and low emissions systems that have achieved new industry levels for emissions reduction.

Agilis has also supported development of turbine engine designs for advanced helium cooled small modular nuclear reactors powered by stored nuclear waste material. Our customer's published research suggests that there is enough degraded nuclear waste stored in the United States today to fully meet our domestic energy needs once this technology has been fully developed and implemented. If additional DOE and customer internal funding is made available to continue this development, Agilis and other Small Businesses will directly benefit.

Many of these clean energy technologies and energy efficiency programs are ongoing development efforts that will provide future contracts and work for Agilis. Agilis does not receive these projects directly from government agencies. We receive our business contracts and engineering projects from the turbine engine companies. However, the majority of these programs have been driven by specific government initiatives that are aligned with the needs and goals of private industry. In support of these programs, Agilis has been able to grow and hire 23 full-time engineers in 2013 of which 15 have been recent college graduates. These clean energy initiatives create high paying jobs for Small Businesses.

As we try to understand the implications of the Climate Action Plan and its impact on Small Business, we believe there are several related topics and issues that must be addressed by this Committee for the Climate Action Plan to have a positive impact. These topics include stronger encouragement for prime government contractors to flow work to Small Businesses, keeping high-skilled, high value engineering jobs on-shore, meaningful tax incentives for Small Businesses to grow, control on the insurance cost burdens that Small Businesses bear, and consistency in funding subsidies and government research and development initiatives. Small Businesses are often the first impacted when budgets are in doubt. Small Businesses struggle to find the financial stability to weather through the uncertainties of funding delays, sequestrations and continuing resolutions.

Mr. Chairman and Ranking Member, thank you again for allowing me the opportunity to testify today before this subcommittee on behalf of Agilis. I hope I have help you further understand how the Climate Action Plan could impact Small Business.