

Remarks to the House Science & Technology Committee
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Chairman Barton and Congressman Hall, good morning. It is my honor and pleasure to have been asked by you to come and testify at this field hearing of the House Science & Technology committee. You have asked me to describe the Texas Emerging Technology Fund, its objectives, activities and successes, and its role in and relationship to the North Texas innovation economy. You have also asked me to tell you what I see as the most important elements necessary to develop regional innovation capacity and grow the high-tech economy. I am happy to answer both these questions and others you might ask of me today.

It might be important for you to know a bit about my background as it relates to the topics I'll cover this morning. I've been in the career of professional local and regional economic development ever since I graduated from college. Much of my professional focus over the last several years has been on technology-led economic development, the innovation eco-system, and entrepreneurship.

Interestingly, I used to work as President of the McKinney Economic Development Corporation, the community we're in today. At the time I started here in 1996, McKinney was just about 30,000 in population, and now has grown quickly to over 125,000. I've also worked in much larger cities, like Kansas City, where I began my career, and in Dallas, where I ran a large regional economic development organization. Today, I head a trio of organizations, of which the one most pertinent to today's discussion is the Metroplex Technology Business Council. It is the largest membership based trade association for technology companies in the state of Texas.

Because of my background in economic development and technology, I became involved with our Governor, Rick Perry, in the creation of the Texas Emerging Technology Fund back in 2005. It is an economic development fund whose purposes are:

- To invest in early stage technology companies who have the potential to create jobs and wealth in our state;
- To foster research consortiums between industry, universities, the federal government and non-profits to do applied research leading to commercialization of new products; and
- To make grants to public universities in Texas to recruit world-renown or nationally ranked researchers who will translate basic into applied research in their given domain expertise and help launch new products and companies.

Much of the impetus for the creation of this fund had to do with the fact that Texas universities, who have a prolific ability to draw down federal and private

research dollars, have by and large failed to capitalize on their massive research spend in terms of translating that into intellectual property with the potential and support to become commercialized in the private marketplace, thus creating new jobs and wealth. To give you a sense of the depth of this problem at the time, our universities were performing almost \$2 billion of externally funded research per biennium, yet the licensing revenue from the patents produced was only in the tens of millions of dollars. In addition, few universities had the infrastructure, culture or incentive to foster an entrepreneurial climate in and around them.

So, in 2005, the Texas Legislature approved Governor Perry's vision by passing legislation to create the Emerging Technology Fund, or ETF as it's known, and initially fund it with \$200 million. Since then, the legislature has twice met and appropriated an additional \$275 million into the fund. The legislation also called for the establishment of regional centers of innovation and commercialization that would take applications to the fund and build an entrepreneurial ecosystem. There are now 7 regional centers throughout the state and one state-wide center just for life science companies. The legislation also established an advisory committee, or Board, of 17 people, on which I have served since its inception in 2005, and for which the Governor just reappointed me to serve as the Vice-Chairman for the next two years. This advisory board considers applications that make it through the regional innovation centers, considers them, and recommends which ones should be approved by the Fund's Trustees, namely, the Governor, Lt. Governor and Speaker of the House. A decision to make an investment out of the fund requires the unanimous support of all three Trustees.

So, what have been the results?

- A total of 106 projects (early stage company investments, research matching grant consortiums, & research talent acquisition) have been awarded over \$240 million in ETF money, with another 31 projects worth almost \$62 million in either the contract or final approval stages.
- By year's end, we'll easily have over 100 early stage companies in our portfolio, making the ETF the most active early stage investment fund in the country, and creating a global competitive edge for Texas. National recognition has given to the fund as a model to be replicated on both the federal and state levels.
- Also since the creation of the fund, 45 world class researchers and their teams with the experience and culture to commercialize their research have been recruited from around the world to 14 Texas public universities. Today, the fund's investment of over \$74 million to recruit those teams has resulted in attracting over \$200 million additional dollars from private and federal sources into those institutions...and we're still counting.
- The fund is open to all technology sectors for investment and currently has a very diverse portfolio of medical devices, energy, nanoelectronics, semiconductors, pharmaceuticals, biopharmaceuticals, IT, biotechnology, robotics, nanomedicine, defense, aerospace telecommunications, and software.
- Over 1,000 seasoned experts (investors, entrepreneurs, economic developers, researchers, and industry representatives) volunteer their time on the state

- advisory committee and the 8 regional centers around the state to evaluate, coach, mentor and select quality investment opportunities for the state to invest in.
- The innovation capacity of the state's rural areas has been dramatically improved since the inception of the fund. Those areas have seen significant success which has resulted in investments into multiple companies and universities in those regions. Additionally, angel investment funds have formed in these regions to invest in early stage technology companies that didn't exist before.
 - Every company receiving an investment from the ETF has a collaborative relationship with one or more Texas institutions of higher education. Thousands of entrepreneurs have been counseled through the ETF process.
 - In North Texas, the ETF has funded 28 projects to the tune of over \$60 million, which has been matched by private and other public investments in the millions of dollars. Our universities have a greater capacity for and relationship with the entrepreneurial ecosystem, and cutting edge applied research is being done in conjunction with industry in areas such as advanced semiconductors, atomically precise manufacturing techniques, and nanomaterials and nanoelectronics. Better linkages now exist between the 9 incubators in our region, the universities and our angel and venture capital communities.

I can safely say that the ETF has been a catalyst for the creation of new companies, a new entrepreneurial culture in our universities, and new wealth and jobs in our state, at precisely the time when we have needed it the most since the dot-com bust in the early part of this decade. The ETF model leverages federal research and private investment dollars with a relentless focus on commercialization of intellectual property.

You've also asked me to comment on the requirements for regional innovation capacity and how to grow the high tech economy. The other speakers today certainly will address some of these items in more detail than I, however, let me lay out in short order the key components I see as necessary, and then we can have a more in-depth discussion on any or all if you like.

Regional Innovation Priorities for Growing the High-Tech Economy in North Texas

- Continued federal leadership in funding basic research, and regional leverage of federal and private research in a collaborative model that stresses basic and applied research science as well as commercialization results.
- Knowledge intensity - creating more tier one research universities in North Texas, which the state laid the groundwork for this past legislative session with the passage of House Bill 51. It creates a system of incentives for those 7 public universities in Texas, 3 of which are located in North Texas, to get awarded state dollars for successfully competing for federal and private dollars, so that they can grow faculty, research and facilities.
- Maintaining and enhancing an entrepreneurial culture in both the public and private sector, one that is tolerant of both risk and failure, and rewards success.
- The availability of early stage funding for companies. While the ETF and the angel investment community in North Texas have made a difference, the venture capital model here and throughout the country is undergoing a transition of

funding availability, exit strategies, and pricing expectations, with the result that there is a shortage of this type of growth capital now. It is interesting to note that 20% of all Americans work for a company that was at one point funded with venture capital.

- The continued need for high-skilled immigration. With a growing number of baby-boomers retiring out of our technology industries over the next 10 years, and the fact that we don't have enough U.S. born kids in the pipeline today to fulfill our workforce needs, even in this current economic climate, the tech industry needs to have the ability to recruit from abroad.
- A workforce development program that gets more U.S. kids interested and engaged in science, technology, engineering and math, and adequate numbers of teachers to teach and inspire them. You'll certainly hear some great ideas and initiatives on this from Mr. Luce.

I hope the comments that I have shared with you today have been helpful and will assist you in continuing to craft and support a progressive federal policy on innovation. I want to particularly thank the Chairman, Congressman Gordon, for his leadership in passing the America Competes Act, and for Congressman Hall's persistent support of federal science and technology policy and for his constituents here in North Texas.

I would be happy to answer any questions you might have, and thank you for having me here today.