Harvesting Clean Energy
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Under Secretary for Rural Development
Keynote Address

Good morning. Thank you, Peggy [Beltrone]**, for that very generous introduction. It is a distinct pleasure to be with you today.**

I'd like to begin, while Peggy is still here, by acknowledging and thanking the 25x25 Coalition for its outstanding vision and leadership.

How time flies when you're having fun. Goes without saying.

It was less than four years ago that a small group of visionaries calling themselves the Ag Energy Working Group published a report with the somewhat awkward title of "25 by 25: Agriculture's Role in Ensuring U.S. Energy Independence – A Blueprint for Action."

Many people said they were unrealistic … naïve … engaged in wishful thinking. I worked with, encouraged and supported their vision. <u>But in retrospect, they were right</u>.

As they gathered momentum, the Ag Energy Working Group morphed into the 25x25 Coalition as we know it today. And six weeks ago, on December 19, President Bush signed into law the Energy Independence and Security Act of 2007.

That Act, in addition to its historic provisions on energy efficiency and biofuels, also contains language expressing the sense of the Congress that:

> ***"it is the goal of the United States that no later than January 1, 2025, the agricultural, forestry and working land of the United States should provide from renewable resources not less than 25 percent of the total energy consumed in the United States and continue to produce safe, abundant and affordable food, feed and fiber."***

<u>Peggy</u>, that legislative language is a direct tribute to you - Read, Sara, and your colleagues at 25x25. Some people just sit on the beach and watch the waves come in. Others paddle out and surf the waves. But the people who really make a difference are the ones who <u>make</u> the waves. That's what 25x25 has done, and all of us are in your debt.

I know it hasn't been easy. A moment ago, I referred to the Ag Energy Working Group back in 2004 as a small group of visionaries. I could just as easily have called them "the usual suspects."* If you've knocked around agriculture for any period of time, you've probably walked a lot of miles with people like Duane Acker, Sara Wyant, and Read Smith.

While I'm calling people out, I'm also very pleased that Mark Simmons, our State Director here in Oregon, and Jeff Deiss, Don Hollis, and Martin Zone from our Oregon State Office are here as well. So are Tuana Jones, Daryl Moser, and John Gunthmiller from the Rural Development Washington, Idaho, and Montana offices.

USDA Rural Development is essentially an investment bank for rural America. We have a current portfolio just shy of $100 billion invested in rural infrastructure, housing, community facilities, and businesses.

In Oregon alone since 2001 Mark and his team have been responsible for more than $1 billion in new investment in rural areas. The investment figures for the other three states are similar. These folks do a great job. Please give them a hand.

We're here today for two reasons … because renewable energy is going mainstream … and because it is, in fact, probably the greatest new opportunity for wealth creation in rural America in our lifetimes.

This isn't just about corn ethanol … it's cellulosic ethanol, biodiesel, other biomass, wind, solar, geothermal, and methane gas recovery. We are in the early stages of a very large transition. The 25x25 Coalition has helped get things rolling, but 25x25 hasn't worked in a vacuum, or alone. This is happening, in fact, around the world.

Five weeks from now, the United States will host WIREC 2008, the Washington International Renewable Energy Conference. I know that

some of you here will be attending and exhibiting. I encourage all of you to check it out on the web. This is a great opportunity to share ideas, policies, and best practices from around the world.

WIREC is the successor to two earlier international Ministerial Meetings in Bonn and Beijing in 2004 and 2005, as well as the <u>Advancing Renewable Energy Conference</u> hosted by USDA and the Department of Energy in October 2006. It's important for us to recognize that the buildout of renewables is now global in scope.

Western Europe has long been a leader … Brazil until recently led the world in ethanol … Japan, China, India, and others are making major investments and starting to put big numbers on the board.

The U.S., in fact, by some measures is actually a relative latecomer to the field. But that has changed … in a big way … in this decade. It may be ancient history now, but President Bush made a comprehensive energy strategy a first order of business in 2001 - less than 4 months after taking office.

That was followed by the Energy Title of the 2002 Farm Bill … a series of pro-renewables tax incentives … the Energy Policy Act of 2005 … the Advanced Energy Initiative a year later … the 20-in-10 Initiative last year … the 2007 Energy Act … and an aggressive pro-renewables proposal for the new Farm Bill, which is still in Congress.

None of this, in my view at all , is surprising if you know President Bush. Texas is now the nation's leading wind energy state thanks to a model Renewable Portfolio Standard signed into law by then-Governor Bush in 1999. The President isn't a newcomer to this issue. He has not pandered this issue – he's provided leadership – much needed leadership.

Very clearly a new national consensus is forming. The President has led. The 25x25 Coalition and many others have pitched in. Slowly but surely, we've built bipartisan support in Congress for renewables …

… and I am confident that when the history of renewable energy is written, the first decade of the 21st century will stand out as the key period of transition … the moment when the formerly unreachable became not only doable, but <u>unstoppable</u>. You know the figures.

- **We have already <u>quadrupled</u> ethanol production in this decade, with two more years to go.**

- **The 36 billion gallon Renewable Fuels Standard the President signed last month … a five-fold increase over current levels … ensures that this rapid growth will continue for years to come.**

- **Cellulosic ethanol is moving into production. This will move ethanol beyond the corn belt and make it a national resource. I know there is great interest in the Northwest about cellulosic ethanol and potential regional feedstocks. The door is wide open. We must make sure you can participate.**

- **I can't tell you what the feedstocks of the future will be. But I can tell you this. USDA Rural Development administers something called the Biomass Research and Development Program … the Section 9008 Program for short. The current round of grant applications is now being evaluated. I can't speak to specific**

applications … but I can tell you, for this one small program, that we have more than 300 potential feedstocks under review.

- **These include the standard grasses, grains, manures, straws, stover, and algae. And that just scratches the surface. Researchers are working on exotic grasses, cottonwood, hyprid poplar, black willow and ash … on various species of pine and fir … on cattails and duckweed … and on hundreds more. You won't have to mow weeds you'll just be harvesting biofuels.**

- **Which of these will meet the test of the market, none of us can yet say. But if you farm … or if you are involved in forestry … or if you are involved with collateral research, training, or fieldwork in industry or the Land Grants or the community college system … there's a good chance you'll be in the biofuels business in some way, shape, or form before too long.**

- **We look forward to helping accelerate that process. As you know, an aggressive renewable energy package, focused especially on loan guarantees for first generation cellulosic ethanol plants, was**

a key part of the President' proposal for the new Farm Bill. That is still in conference. I can't get ahead of our friends on Capitol Hill … but I would frankly be very surprised if the gist of the President's proposal isn't part of the final bill. Commercializing cellulosic ethanol will continue to be a priority for USDA.

- **Biodiesel is another story. The United States produced 2 million gallons in 2000, an estimated 450 million gallons* last year and we're on the way to nearly 800 million gallons by 2010 according to USDA's baseline projections.**

- **The further growth of biodiesel depends on developing new feedstocks. That's another significant research priority, both in and outside of government, as we look to the emergence of new, dedicated energy crops in all regions of the country.**

- **On yet another front, one of the most dramatic … and yet almost unreported … headlines of recent years came just last week. The United States last year installed more than 5.2 gigawatts of wind power capacity. That figure is <u>unprecedented</u>, anywhere in the world.**

- **At the beginning of this decade, total installed wind capacity in the United States was just 2.5 gigawatts. That's not a one-year figure; it's cumulative. We installed more than double that figure last year alone. The cumulative total now is 16.8 gigawatts, an almost 7-fold increase in 7 years.**

- **Washington and Oregon are 5th and 7th among the states in total capacity. The 4-state Northwest region by itself has nearly as much capacity as did the entire nation eight years ago.**
- **The United States has now led the world in new installed wind capacity for each of the last three years. We lead the world in biofuels. We lead the world in geothermal and waste to energy. We lead the world in solar thermal. Germany is the world leader in photovoltaics, but photovoltaic shipments in the U.S. have increased tenfold since 2000.**

We could recite statistics all day long, but the picture is clear. While it is still building out from a low baseline … about 7 percent of the total

U.S. energy supply … renewable energy is clearly taking off … in the United States and in a growing number of other countries as well.

From a rural development perspective … from <u>your</u> perspective, and mine … this is an extraordinary opportunity. Renewable energy, because of its feedstocks and siting requirements, is inherently distributed and predominately rural in character … and the potential is very large.

Just stop and think … if we can displace even one billion barrels of imported oil with biofuels, with oil at $90 or $100 a barrel … that's a new market for American producers larger than today's net farm income. And that's just biofuels. The potential may be every bit as large or even larger from wind, solar … and perhaps down the road, from the potential market for <u>carbon mitigation</u> and <u>sequestration</u> as environmental policy evolves in those areas.

The challenge <u>for us</u>, therefore, is to harness this potential in ways that are good for the nation, good for farmers, and good for rural economic development. Let me be clear about this.

For USDA, this isn't just a question of national security and energy policy. Those are obviously extremely important considerations. <u>But for us this is ALSO a question of sustainable agriculture, sustainable forestry, and rural economic growth</u>.

In each of these areas, USDA Rural Development stands ready to be <u>your</u> partner in maximizing the benefit to rural America.

I would remind you that farm equity has doubled in the last 10 years, in part … perhaps in large part … because the markets are factoring energy production into the price of farm ground. The food-feed-fiber equation is becoming food-feed-fiber- and energy … and as usual, the markets are quick to re-price assets to reflect anticipated income streams.
In any event, America's farmers now control over $2 trillion in assets … assets that can … and I would submit some fraction of them <u>should</u> … be leveraged into ownership if we are serious about maximizing the benefit of the renewables revolution to rural America.

We have been studying … and have just published an analysis … of investment and ownership models that we hope will encourage and help rural investors to move in that direction.

So this is an historic opportunity. I've touched on the role of government. Government has been important in funding research and accelerating the commercialization of new energy technologies.

USDA Rural Development alone since 2001 has directly invested over $650 million in more than 1,700 projects renewable energy and energy efficiency projects. Our investment has leveraged nearly $1.8 billion in private funds over and above the federal commitment. Oregon last year ranked 4th nationally in our Section 9006 Program – so again, give Mark Simmons and his team a lot of credit. They've made terrific progress.

This is just USDA Rural Development. The total federal commitment, across all of USDA, the Department of Energy, and other agencies is much larger … nearly $18 billion since 2001 to research, develop, and promote clean and efficient energy technologies, including renewables.

But while the government role is important, remember again that the potential government investment is dwarfed by the $2 trillion in net farm equity that I mentioned earlier …

… not to mention the participation of millions of other potential rural investors who may not farm … but who can and should be encouraged to seize the opportunities that exist at every point in the value chain as we build out these major new industries in rural America.

So again, it's important to realize that the fundamentals have shifted. $100 oil will do that. Private capital, really for the first time, is entering the field in a big way. Government still plays a role, but this is no longer just a story about government incentives. The <u>markets</u> are reading the signals and anticipating a new energy economy in the decades ahead. And private capital is moving in a big way.

I would submit to you that there are two key drivers in this development. The first is the global explosion of energy demand. Probably the most important single thing that has happened since the end of the <u>Second</u> World War was the end of the <u>Third</u> World War … the Cold War … symbolized by the fall of the Iron Curtain.

Since the fall of the Berlin Wall, between 2 and 3 <u>billion</u> people have joined the world market system. This is the greatest expansion of economic freedom in world history.

There are many ancillary issues. A lot of those 2-3 billion people have turned out to be formidable competitors. The world is a much wealthier, and much more competitive, place than it was a generation ago.

Some of the results we anticipated. In agriculture, for example, we very eagerly anticipated that the opening of the former communist block would mean new markets for American farmers.

That has happened, and it's all to the good. As people become wealthier, one of the first things they do is eat better. Hundreds of millions of people are now working their way to a better future … living better … and in the process helping drive U.S. farm exports to a record level.

But what we failed to anticipate until recently, however, was the impact of this new world economy on commodities prices, especially energy. A decade ago, in the wake of the Asian financial crisis, oil dipped briefly below $10 a barrel. It was in the $20-25 range most of the 1990's.

But we all know what has happened since then. China is now the world's second largest automotive market and oil importer. India is growing at 8% a year. That's a lot of people graduating from busses and bicycles. Energy markets will never be the same. The surge in interest in renewables is one result, and it means that the opportunity for agriculture and rural development is essentially open-ended.

Secondly, connectivity changes everything. The synergy between broadband and distributed computing and inherently distributed renewable energy resources is very powerful. It's transformative.

This is a big deal. To take just one example, the ability to sell eastern Oregon windpower in Portland, Seattle, or California … isn't just a matter of putting up windmills and plugging in the air conditioner.

What is required is the ability to integrate seamlessly with a regional and national grid that balances loads across a continent … plus the ability to measure and appropriately price distributed generation …

plus the availability of transmission corridors to gather and move a highly distributed resource to new markets.

Connectivity plugs everyone into the game. It empowers distributed production. It also allows dispersed, networked systems to achieve economies of scale … something that has been very important, for example, in the buildout of a highly decentralized biofuels complex that is dependent on localized sourcing of feedstocks.

Bottom line - Put all of these things together and the result is literally a "Rural Renaissance." This won't happen overnight. It will be the work of decades. It will pose challenges to the scientists to identify new feedstocks and progressively increase energy yields.
It will pose challenges to rural investors and traditional lenders to stake an equity claim to these new industries being built out in our own backyards. There are opportunities at every point … production … transportation … conversion … distribution and marketing … banking, finance, and insurance … and the spinoffs are endless and most if not all are significant in value. – Don't forget.

It will pose challenges to State and local governments to resolve tax, regulatory, and logistical affecting renewables. We need to resolve the blend wall issue for ethanol. We need more E85 pumps and flex fuel vehicles on the road. We need new transmission corridors for large scale rural wind and solar production. And we need a regulatory environment that facilitates the necessary investments.

So there is work to do at all levels. But the opportunity is enormous … and I am convinced, when we look back 20 and 30 years from now … we will astonished at how far and how fast we have come. Thank you.