

rates down and more money can be borrowed by people in their private lives and business and personal lives. And when our trading partners get in trouble, like Asia has in the last 2 years, they can get the money they need at lower cost because we won't be taking it out of the system.

And the third thing we ought to do is give every kid in this country a world-class education. Now, if we can do those three things, we can

maximize the chances that our children's generation will have greater prosperity than we do.

NOTE: The interview was videotaped at 5:04 p.m. in the Roosevelt Room at the White House for later broadcast. This interview was released by the Office of the Press Secretary on August 12. A tape was not available for verification of the content of this interview.

## Remarks on Developing and Promoting Biobased Products and Bioenergy August 12, 1999

Thank you. Well, if Amal Mansour gets tired of alternative energy, she might consider politics for a career. [Laughter] She gave quite a speech, and I thank her.

### *Shootings at the North Valley Jewish Community Center*

Let me just say, before I begin, I would like to say just a few words about the latest developments in the shootings in Los Angeles. It now appears that they were motivated by racial and ethnic hatred. If so, that's the second such incident we've had in the last couple of weeks, along with the killings that occurred in the Midwest, which you all remember very well, and another compelling argument, in my judgment, for this country to renew its commitment to our common community, our common humanity; and another compelling argument for the passage of the hate crimes legislation and the commonsense gun legislation we have recommended.

I know the Attorney General spoke about this earlier today, but I wanted to strongly support and associate myself with her comments on this.

### *Biobased Products and Bioenergy*

Now, let me tell you, I may be the happiest person here today because I have been a supporter of bioenergy for more than 20 years now. When I was Governor, I tried to promote the use of wood waste. We opened a little ethanol factory in my home State. We worked on whether rice hulls could be used as energy. I've sort of been tapping my foot, waiting for 20 years for the moment to come when both the tech-

nology and the economics and the social awareness, all this stuff would kind of fit together.

I want to thank Secretary Glickman, Secretary Richardson, Administrator Browner for their support of this. I want to say a special word of appreciation to Senator Dick Lugar, the chairman of the Senate Agriculture Committee. He wrote a brilliant article with Jim Woolsey in the January-February edition of *Foreign Affairs*, called "The New Petroleum." And I see some of you nodding your heads, and if you had read it, you had all read it, you would all be nodding your heads. It's not only brilliant, but a guy who is scientifically challenged like me can understand it, which is very important.

I want to thank Senator Tom Harkin, who is not here today, couldn't be here today, but who has worked passionately on this issue. We have been talking about it for more than a decade now. And I want to thank Dr. Dale for your work and Amal Mansour for your work and your success, and all of the panelists who are here.

This is one of those speeches that Presidents have to give, you know, where you're preaching to the choir, because you all agree with this. And you see this fine family over here. They were introduced earlier in a way that is bitter-sweet. The present, terrible crisis we have on our farms heightens all of our awareness that we can do this. And as many have said, as Senator Lugar and Mr. Woolsey argued in their piece, even in good agricultural times, when farm prices are high and the land is in use, there is more than enough land available at sound conservation practices for us to develop

this if we can develop the biocatalyst and the advance processing technologies necessary to make bioenergy work.

So I am very, very pleased about this. I think we have to see this in a context of where we've come from and where we're going. One of the most important technological advances of this century came 90 years ago in a old farmhouse overlooking Lake Michigan, where William Meriam Burton, who was a chemist for Standard Oil, figured out how to launch the modern petrochemical industry. He understood that this new contraption called the automobile was about to create this huge demand for petroleum products, and he understood that he had to squeeze more power from every molecule of petroleum. And because he did that, we had the prosperity we enjoyed, and we have many of the challenges we face today, because of what he did in that small place, so long ago.

This paved the way for the automobile era. It showed us the power of science to change the paradigms which govern our world. And on the verge of the 21st century, we may be nearing a similar breakthrough, a technological fix that can help us to meet our economic challenges, maintain our security, sustain our prosperity, and ease the threat of global warming. Science will be the key to our progress.

If we can make the raw material of tomorrow's economy living, renewable resources instead of fossil fuels, which pollute the atmosphere and warm the planet, the future of our children and our grandchildren, the likelihood that there will be more prosperity and peace, the likelihood that all these sort of sci-fi, "Road Warrior" movies about the 21st century will be nothing more than a figment of someone's imagination, all that will be far greater. One hundred years from now people will look back on this time and compare it to the time when Mr. Burton figured out how to get more out of every petroleum molecule, if we do our jobs.

Now, if you look at what's going on with trees and plants today, it's very impressive. And it's already been discussed here at the podium, but once we used only a seed or a kernel, tossed away the rest. Now we're learning how to use entire plants. Microscopic cells are being put to work as tiny factories. They convert crops and even waste into a vast array of fuel and material, everything from paints to pharmaceuticals to new fibers. And our ability to use

waste in these ways will also be critical to our future.

We are best served by new technology when we ask what we hope to achieve. And again, at the risk of preaching to the choir, because this is an important—there's not a lot of controversy here; I don't know, therefore, if we can generate any news. [Laughter] But I can tell you, 20, 30, 40 years from now people will look back on this meeting as an historic meeting if we do our job. Why? There are four reasons.

First, the potential economic benefits are staggering, not only for farmers—they are obvious, because they can raise raw material—but for the timber industry, chemical manufacturers, power companies, and small entrepreneurs like Amal. And the Vice President is in Iowa today discussing how these technologies can help close the opportunity gap between urban and suburban and rural America by bringing new high-tech jobs to rural areas which have not yet participated fully in our prosperity.

Second, by substituting domestic renewable resources for fossil fuels we ease our growing dependence on foreign oil, and because inflation has been low and growth has been high, no one is paying attention to this. But we are going to have—with the growth of population here and growth of population around the world, the increasing economic activity around the world—you're going to have enormous competition for oil which will make its supply more problematical and its price much higher within a relatively short time unless we do something to ease our dependence. It's important for our economy, for our security, for our environment.

Third, as the Council of Advisers on Science and Technology concluded in a recent report, we can help developing countries meet their own soaring needs for energy in ways that, again, improve the global environment and stabilize economies and societies.

And fourth, as I've already said, this will help us to meet the challenge of climate change, which I am convinced will be the most formidable environmental challenge the world faces over the next 20 to 30 years.

Scientists tell us this decade is probably the warmest in a thousand years, but the heat and drought of this summer, the natural disasters of the last few years are probably only a taste of what is to come, unless we act now to deal with this challenge. Bioenergy is a means to achieve all of these objectives, to heat our

homes, to fuel our vehicles, to power our factories, while producing virtually no greenhouse gas pollution.

To make the most of these opportunities, Government and industry must work together, as partners. In industry I include agriculture and small and big business, government and everyone in the private sector who is involved in this. The Government provided critical leadership in developing the semiconductor and the Internet. And we must also nurture these fledgling bio-industries in the same way.

In a few moments, I will sign an Executive order to accelerate development of these 21st century technologies, to strengthen our economy, and protect our environment. I'm establishing a Cabinet-level council to develop strategic plans to help to bring bio-based technologies from farms, forests, and labs to the marketplace.

In addition, I am setting a goal of tripling America's use of bioenergy and biobased products by 2010. That would generate as much as \$20 billion a year in new income for farmers and rural communities, while reducing greenhouse gas emissions by as much as 100 million tons a year, the equivalent of taking more than 70 million cars off the road. And believe me, if the technology develops fast enough, it would be easy to beat this goal. In this way, we plant the seeds of a new technology for a new century, to sustain both our prosperity and our environment.

In addition to exploring the further use of bioenergy, I just want to say there are other things we need to do as well. I'm sure you all would agree. We need to do more to accelerate the development of flexible-fuel vehicles. If we develop these energy sources, there must be something to receive them. So we need to do more of that, and we've got a couple of them outside that everybody ought to see.

We also must recognize that there are available today, at prices which are attractive today and will grow increasingly attractive tomorrow as oil prices go up, elemental technologies that promote conservation and cut costs so you save energy and money, in homes, in farms, in factories today, elemental technologies that are still not being maximized.

We just had a big announcement a couple days ago on a new light bulb that I believe will be much more attractive than the lighting systems, the conservation lighting systems that

have been developed so far, and will save people millions and millions of dollars and an awful lot of energy. So we have to be sensitive to all these things if we expect to have the world we want for our children.

Last year—I am very grateful that the Congress voted for another billion dollars to research and develop clean, energy-efficient technologies, including bioenergy. In my present balanced budget, I have proposed further investments in these technologies, as well as tax credits for businesses and consumers who choose energy-efficient cars, homes, and appliances. I know that Senator Lugar has a specific piece of legislation which would dramatically increase our investment in bioenergy research.

Anything we can do in this area, in my judgment, will have huge paybacks. And so, to all of you, I ask that you do what you can during this August period and when the Congress comes back to put this issue beyond partisan politics, to put it beyond the debate. We're talking about a tiny fraction of the budget for the combined recommendations we have made that can change the whole future of this country and this world, in the way that the automobile and the perfection of the petroleum processing did at the beginning of this century.

I can hardly tell you how strongly I believe that this can happen. And when it does happen, we will look back and be amazed, number one, that we took as long as we did to do it and, number two, how cheap it was to do it for the benefits we got out of it. We will all be amazed.

So anything any of you can do to make sure that 100 years from now somebody can talk about people like these two fine people who just spoke in the same way we talk about the people that perfected petroleum and developed the automobile: to ensure that more of our farm families get to stay on the farm and people can make a decent living in rural America in an environmentally sustainable way; to liberate America and other countries from their dependence on unstable sources of petroleum; to break the mindset that exists among too many both here and around the world that you cannot have economic development without burning more fossil fuel and, therefore, burning up the planet is just the inevitable consequence of getting ahead; anything you can do to roll back those problems and to create opportunities will be profoundly important to the kind of world our

children live in and what people say about you and our generation 100 years from now. It's hard to think of a greater gift we could give at the turn of the century or a new millennium than a clean energy future.

Thank you all, and God bless you for your work.

NOTE: The President spoke at 2:26 p.m. on the Whitten Patio at the Department of Agriculture. In his remarks, he referred to Amal Mansour, chair of the board of directors and chief executive officer, Manufacturing and Technology Conversion International, Inc.; R. James Woolsey, former Director, Central Intelligence Agency; and Professor Bruce E. Dale, chair, Department of Chemical Engineering, Michigan State University.

## Memorandum on Biobased Products and Bioenergy

August 12, 1999

*Memorandum for the Secretary of Agriculture, the Secretary of Energy, the Secretary of the Treasury, the Administrator of the Environmental Protection Agency*

*Subject:* Biobased Products and Bioenergy

Today I issued an Executive Order, "Developing and Promoting Biobased Products and Bioenergy," to further the development of a comprehensive national strategy that includes research, development, and private sector incentives to stimulate the creation and early adoption of technologies needed to make biobased products and bioenergy cost-competitive in national and international markets.

Consistent with the objectives and activities in that order and to ensure that the Nation moves efficiently to exploit the benefits of expanded use of biobased products and bioenergy, I hereby direct as follows:

- (1) The Secretaries of Agriculture and Energy, in consultation with other appropriate agencies, shall, within 120 days of this memorandum, prepare a report outlining and assessing options for modifying existing respective agency programs in fiscal year 2001 to promote biobased products and bioenergy with a goal of tripling U.S. use of biobased products and bioenergy by 2010. Programs include, among others, conservation and utility programs within the Department of Agriculture (including the Conservation Reserve Program and the Environmental Quality Incentives Program); technology assistance and other small business programs; and education and extension programs. The report also

shall include an assessment of: (a) the evidence to determine whether modifications to the tax code are a cost-effective policy option for review by the Department of the Treasury; and (b) the potential to expand use of biobased products and bioenergy by Federal agencies including co-firing with biomass at Federal facilities, use of biofuels in Federal vehicles, and Federal procurement of biobased products and bioenergy. Such expanded use shall be consistent with agency opportunities and the President's budget.

- (2) In preparing this report, the agencies shall:
  - (a) work closely with the Environmental Protection Agency to ensure that actions recommended reflect a careful review of the environmental benefits, concerns, and net environmental consequences created by expanded use of biobased products and bioenergy. The factors considered should include:
    - (i) impact on net emissions of greenhouse gases including carbon sequestered by biomass crops, and substituting low net-carbon, biobased products, and bioenergy for products manufactured from fossil fuels; and
    - (ii) emissions of criteria pollutants and air toxics and other environmental consequences of production of biobased products and bioenergy; and
    - (iii) changes in water quality, soil erosion, pesticide and fertilizer use, and wildlife habitat as a consequence of changes in land use associated with biomass production; and