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THE WORLD RESOURCES INSTITUTE  
ON  
TAX REFORM AND THE ENVIRONMENT

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PARTICIPANTS:

Moderator:

WILLIAM GALE, Deputy Director and Arjay and Francis Fearing Miller Chair,  
Economic Studies, Brookings Institution;  
Co-Directors, Urban-Brookings Tax Policy Center

Panelists:

CRAIG HANSON, Senior Associate, World Resources Institute

STEVE ELLIS, Vice President, Taxpayers for Common Sense

GILBERT METCALF, Chair, Department of Economics, Tufts University

Discussants:

WILLIAM FRENZEL, Member, President's Advisory Panel on Federal  
Tax Reform;

Guest Scholar, Brookings Institution;  
Former Member, U.S. House of Representatives

PAUL PORTNEY, President, Resources for the Future

P R O C E E D I N G S

MR. GALE: [In progress.] on tax reform and the environment. There are many reasons to be interested in this issue. From the tax side, the President's tax reform panel continues to deliberate on ways to fix the tax system, and changes in environmental taxes offer one of the major, important ways to improve the structure of taxes. That alone makes environmental taxes worth considering. From the fiscal side, the nation continues to face large budget deficits, and environmental taxes are a juicy source of additional revenue, or at least could be. So that adds to the allure.

I think it's fair to say that in our current tax and budget situation, we do not have the luxury of ignoring reform options that can both improve the structure of taxation and raise the level of federal revenues.

But as the old late-night TV commercials used to say, but wait, there's more. What if we could get a policy that not only improves the structure of taxation and not only raises revenues, but also has the potential to clean up the environment? And just for good measure, if you call right now, we'll toss in the fact that it would probably also be good foreign policy, too.

So such is the potential of environmental tax reforms—good tax policy, good budget policy, good environmental policy, good foreign policy. This type of one-stop shopping is something that policymakers ought to

be very interested in now and in the future, and our goal here this morning is to simply clarify and form what these choices are, what the framework ought to be to think about these issues.

This event is the result of two different research areas here at Brookings. One is the Tax Policy Center, which is a joint venture between the Urban Institute and the Brookings Institution. The TPC has been hard at work on tax reform issues this whole year. One aspect of that is a series of conferences, of which this is a part, called "Prelude to Tax Reform."

Earlier events in this series included overview of reform issues, a discussion of the estate tax, a panel on tax sheltering, and work on tax simplification and compliance issues. In the future, we will have additional conferences on tax reform as events merit.

The other key Brookings input comes from David Sandalow, who is the director of the new environment and energy project here. David was instrumental in conceiving of and planning this morning's event. In the past year, David and other scholars here have convened several conferences on global warming, with speakers including Senators John Kerry, Chuck Hagel, John McCain and Joe Lieberman, among others. They also hosted a conference on oceans policy, and at the end of this month they'll host a forum on development assistance and the environment.

This is a growing and important area of work here at Brookings, and we at the Tax Policy Center are quite happy to convene this event in conjunction with David and the environmental and energy project.

I would also like to give special thanks to Craig Hanson and the World Resources Institute. Craig was a key part of the planning and organization and inspiration of this event. WRI, as you'll hear more, is a global environmental think tank that links analysis with engagement to put ideas into action.

All right. We have an excellent panel this morning. I will introduce them to you very briefly. You should have bios that were handed out outside.

Our first speaker will be Craig Hanson, who is a Senior Associate at the World Resources Institute. He'll be followed by Steve Ellis, who is a Vice President for Taxpayers for Common Sense. Our third speaker will be Gib Metcalf, who is a Professor and Chair of Economics in the Department of Economics at Tufts University.

We have two discussants. One is Bill Frenzel, who is not only a guest scholar here, but a member of the President's Advisory Panel on Federal Tax Reform, and who has actually lived through environmental tax battles as a member of Congress, and Paul Portney, who is currently the President of Resources for the Future, and I just found out will shortly leave RFF after 33 years to become Dean of the Business School at the

University of Arizona. And Washington's loss will certainly be Arizona's gain.

Anyway, I will ask the three speakers to go a maximum of 15 minutes each, the two discussants to go about 10 minutes each, and then we'd very much like to get into questions and answers and discussion with all of you.

So without further ado, let me turn the mike over to Craig.

MR. HANSON: Thank you, Bill. I'm here to kick off a discussion about federal tax reform and the environment. And some of you may be wondering what do these two topics, taxes and the environment, have to do with one another. Well, I hope that after today's panel discussion and the discussants' comments that you'll agree that there is actually quite a lot.

And as Bill was mentioning, what you're going to hear today from panelists is that there are a lot of changes to the tax code that can be made that can address issues of deficit reduction, tax reform, as well as addressing environmental challenges. And these are changes to the tax code that not only would improve fiscal responsibility, but also environmental quality.

Now, I'd like to set the context for today's panel session by sharing with you four observations. The first is that there is a relationship between federal taxes and the federal tax code and the environment, and it's a two-way street.

As we all know, tax policies impact many of the decisions that individuals and businesses make on a day-to-day basis, such as how much to work, spend or save. At the same time, they influence business decisions as to where to start a new business and when to make business investments. Often unrecognized, however, is the fact that tax policy also can influence how much we consume, how we use our natural resources, and how much pollution is released into our air and water.

Now, some tax policies have intended positive impacts on the environment. For instance, since 1989 excise levels on ozone-depleting chemicals have played a role in reducing the production and use of chloro-fluorocarbons. Other policies have unintended negative consequences for the environment and human health.

For instance, farmers who irrigate in the Great Plains get a tax deduction for extracting ground water in volumes that exceed what is naturally replenished each year. Therefore, farmers are receiving a tax break for an inefficient use of a national asset, namely our aquifers.

Now, not only can fiscal policy impact environmental health, but also environmental policy can impact fiscal health. And by this I'm referring to the fact that policies such as environmental levies can raise revenue, and I think this is an important consideration as the administration tackles a number of fiscal policy issues such as deficit reduction or fundamental tax reform.

Let's consider for a moment the budget deficit. It reached a record \$412 billion last year and many analysts expect that deficits will continue in the future, especially as the baby-boomers retire and start collecting Social Security benefits and Medicare benefits.

Some observers have concluded that spending restraint alone will be insufficient to address this issue. Just six weeks ago, in fact, Federal Reserve Chairman Alan Greenspan stated that he expects new revenue measures to be part of any eventual agreement to reduce the deficit.

Perhaps environmental levies could play a role.

Alternatively, consider the President's tax reform initiative. Some of the reform proposals being offered to the commission include provisions to further shield savings and investment from taxation, as well as to eliminate the alternative minimum tax.

Now, since the President has stipulated that any reform must be revenue-neutral, there's going to be a need for a suite of counterbalancing revenue enhancements. Some of the environmental fiscal measures you're going to hear about today could play a role and be part of that package.

This leads me to my second observation. One action that policymakers could take to meet tax reform and deficit reduction goals is to eliminate a number of existing tax expenditures that are both fiscally and environmental damaging. By tax expenditures I mean tax exemptions, loopholes, deferrals, et cetera; in other words, subsidies that are provided through the tax system.



Most notable among these are provisions for mature industries such as oil, mining, timber and automobiles. For example, the tax code gives independent oil and gas producers, as well as hard-rock mining companies, income tax deductions reflecting the depletion of the non-renewable resources that they extract.

This so-called percentage depletion allowance is different from the traditional depreciation methods that most industries use in that percentage depletion allows total deductions to actually exceed the capital that mining companies actually invest in projects. As such, this provision works against common-sense notions of free markets, innovation, environmental protection and fiscal responsibility. Although this provision may have made sense 90 years ago when it was originally implemented, it doesn't now. These industries are clearly mature and should be governed by the free market.

This subsidy also inhibits development of more efficient technologies, and also discourages recycling which can be more efficient for aluminum and certain plastic resins relative to using virgin stock. And by rewarding extractive activities beyond what is warranted by market demand, the provision also encourages additional environmental damages such as ground water contamination, which we later have to clean up. And if that's not enough, the American public is paying for all this to the tune of about \$4 billion over the next five years. As panelist Steve Ellis from Taxpayers for Common Sense will mention in a few moments, there

are a lot of other similar provisions that could be eliminated, and thereby simplify as well as improve the tax code.

Now, some of you may argue that it's nearly impossible to eliminate tax provisions like these, and I don't deny that it's difficult. Behind every tax provision, there's a very powerful constituency. But such reform has actually been done before. Just last October, for instance, Congress was able to significantly reduce the size of the infamous SUV tax loophole.

My third observation is that an additional opportunity for tax reform in a manner that improves not only fiscal responsibility but also environmental quality is to utilize pollution taxes, or what I will call pollution charges.

Now, political debates about taxes usually revolve around the issue of how much to tax, but an equally important issue, I believe, is what to tax.

Our taxes currently fall primarily on those activities that make the economy productive—work, savings and investment. Such taxes, however, can discourage people from pursuing these vital activities.

A better system would place more of the tax burden on activities that make the economy unproductive and that reduce our quality of life, activities such as resource waste and pollution; in other words, things that we want to discourage.

One way we can do this is through pollution charges. These are fees on the amount of pollution that are released into the atmosphere or into the water and the soil. They are means of tackling what economists call

market failures that arise when businesses or consumers are not confronted with the full health and environmental costs associated with their activities.

Designed appropriately, a charge can address market failures by providing price signals that more accurately reflect these costs. And quite fairly, they make polluters pay for the damages that they cause and incorporate these costs into their business decisions and into their product prices.

Now, by affecting behavior through prices, pollution charges actually harness market forces to improve efficiency and environmental quality. They have several advantages. There are four relative to more traditional forms of environmental protection, such as mandates that polluters use exactly the same technology or reduce emissions by exactly the same amount. For instance, pollution charges encourage cost-effective emissions reductions. Companies that can cut back at little cost will, while those facing higher costs will cut back less.

They're flexible. They allow firms to make their own decisions on how to reduce emissions. They can also stimulate continuous technological innovation for better pollution control methodologies as well as for cleaner inputs. And, in addition, pollution charges generate revenue that can be used to meet other objectives.

So when should pollution charges be used? Economists generally agree that charges are an appropriate policy instrument for certain, but not all

types of environmental problems. For instance, they are effective for addressing pollution that's caused by a large number of different sources, so many sources that permit trading or direct regulations would be difficult to administer.

They are also effective when there's no single technical fix, in that they give polluters flexibility in finding the most cost-effective solutions.

And likewise they're appropriate when the environmental problem is not in danger of reaching a sort of catastrophic threshold in the near future.

This is because pollution charges don't set a ceiling on the amount of pollution that is actually released, but they set a ceiling on the total cost of pollution control. And from an implementation perspective, they are appropriate when emissions or products associated with emissions are relatively easy to measure or monitor.

Now, given these conditions, which types of pollution charges may make sense in the U.S.? For the sake of brevity, I'll mention just two. One option is a pollution charge on fertilizers to address the growing problem of nutrient overloading in our waterways.

Many of you may have heard of the appearance of so-called dead zones in places like the Chesapeake Bay or the Gulf of Mexico. These are vast regions of oxygen-depleted waters where bottom-dwelling organisms die and fish are driven away. Now, these dead zones harm communities that depend upon shrimp, crab and oysters, as well as other industries such as commercial and sport fishing.

Now, dead zones are triggered by nutrient pollution, especially nitrogen, often from agricultural sources. A big part of the problem is that American farmers actually waste a lot of fertilizer. According to the National Academy of Sciences, in fact, 20 percent of nitrogen that's applied to crops is not used by those crops. Instead, much of it actually ends up in rivers, lakes, the coastal areas via run-off and drainage.

A nitrogen fertilizer charge easily administered at the point of sale could address this issue. It would create an incentive for farmers to eliminate their inefficient use of fertilizers, yet still allow them to maintain their yields. Furthermore, it meets the criteria mentioned earlier and it may be one of the few practical approaches for tackling this issue, given the large number of sources of nitrogen run-off.

Now, modeling conducted by some of my colleagues at WRI indicates that a charge incentivizing a 10-percent reduction in fertilizer usage would raise about \$3 billion per year in the U.S.

A second pollution charge I'd like to mention is a levy on the carbon content of fossil fuels. The levy would be proportional to the amount of CO<sub>2</sub>, or carbon dioxide, that's released into the atmosphere when coal, oil and natural gas are burned for energy.

Now, a carbon levy would be a good market-based first step for addressing the challenge of man-made climate change. In order to give individuals and businesses time to prepare and adjust for such a levy, we

could phase it in gradually and then let the market figure out the most cost-effective solutions.

How much would this raise? Let's assume a price range of, say, \$5 to \$25 per metric ton of carbon. The low end of this range reflects prices for carbon currently on the Chicago Commodity Exchange and the high end reflects the cost cap that was recommended by the National Commission on Energy Policy last year.

In terms of consumer prices, what this means is an increase in gasoline of only 1 to 6 cents per gallon—very small. Such a carbon levy would actually raise between \$8 and \$38 billion per year, given current fossil fuel consumption levels.

Now, I realize that energy-related levies are a politically controversial issue in this country, but new challenges do call for new types of solutions. For example, prior to becoming Chairman of President Bush's Council of Economic Advisers, Gregory Mankiw argued in favor of increasing the gasoline tax as a means of implementing fundamental tax reform.

About a month ago, editors of *The Economist* recommended levies on energy in the U.S. as a means to having America address its energy security issues. Duke Energy, one of the country's largest electric utilities, publicly announced in April its support for a carbon levy.

And since January of this year, Americans have been living with what is essentially a 3- to 40-cent-per-gallon levy on gasoline. Yet, we've

outsourced the tax collection function to OPEC. So, thus, we're receiving actually no benefits; you know, no money for deficit reduction, no revenue for assistance to low-income households and no revenue for technology R and D.

Now, there are other candidates for pollution charges, as well. You know, we could pollution charges on airborne emissions, mercury airborne emissions from sources other than utilities. We could also utilize user fees for public lands and natural resources to a greater extent than we currently do here in the U.S.

And before moving on, I'd like to briefly mention broader consumption taxes. I bring this up because many of the proposals being offered to the Advisory Panel on Tax Reform include ideas such as a value-added tax or a national sales tax. Now, there's mixed views on what implications of VAT or a national sales tax would have on the environment.

Does resource consumption actually decline due to rising consumer prices, or are there other factors that actually counter this and actually pollution goes up? I believe that's an actually an area for further research, since VAT discussions typically revolve around issues such as regressivity, and as far as I can tell very few have actually looked at and analyzed in depth the environmental implications.

Now, I acknowledge that introducing pollution charges in the U.S. would be politically challenging, but this actually leads me to my fourth and my final point, which is that initiatives to reform the tax code and to reduce

the budget deficit actually provide a timely opportunity for considering such charges.

In both contexts, policymakers are going to have to make some difficult tradeoffs and they're going to be looking for new revenue measures. So why not consider policies that actually raise revenue, but also at the same time increase efficiency, stimulate technological innovation, improve the environment and protect human health?

Let's consider tax reform for a moment here. Revenue from pollution charges could be utilized to lower other distortionary taxes as part of an innovative revenue-neutral tax reform. For instance, revenue from the charges I just mentioned could be part of a fiscal package that actually reduces, say, payroll taxes.

On the other hand, if the advisory panel recommends eliminating the double taxation of corporate dividends, the foregone revenue actually could be matched by a carefully crafted carbon levy. This essentially entails what's called a tax shift. We reduce taxes on things that we want more of—namely, work and savings—and compensate by increasing taxes on things we want less of—namely, pollution and resource waste. Such a tax shift could help mitigate the impact of pollution charges on households, affected businesses, and so on. And I know that Gilbert Metcalf actually is going to dive into more detail on this issue of tax shift here.



Alternatively, we go beyond revenue neutrality and actually use the proceeds from pollution charges to contribute to federal deficit reduction. This would help ensure that the government is able to meet important policy issues such as national and social security, and it would help us to reduce the opportunity of actually having to raise taxes on our children. Again, as Alan Greenspan and others have recently mentioned, the government is going to have to look for new revenue measures to help address this very important issue. So although pollution charges themselves won't be able to solve this crisis, they can play a very important part.

So to conclude, I hope by my four observations I've given you a sense that taxes and the environment actually have a lot to do with one another. First, fiscal policies impact environmental health, and environmental policies can contribute to fiscal health. It's a two-way street. Second, there are a number of current tax expenditures that, if eliminated, not only would improve the environment, but also would simplify the tax code, reduce the deficit and improve market efficiency. And, third, when considering what to tax, we should consider placing more of the tax burden on activities that actually make the economy unproductive and lower our quality of life, namely resource waste and pollution. And, finally, we could incorporate such pollution charges into either tax reform or deficit reduction initiatives.

So now I'll turn things over to my fellow panelists, who will dive more deeply into some of these issues.

Thank you very much.

[Applause.]

MR. ELLIS: Thank you, and I'd like to thank the Brookings Institution and the World Resources Institute, and particularly Bill and Craig, for pulling this together.

I am Steve Ellis, Vice President of Programs at Taxpayers for Common Sense, and we appreciate the opportunity to present our views on environmentally harmful tax expenditures that are ripe for elimination. In the big picture, these provisions make little economic, fiscal or environmental sense.

When you survey the tax code, there are tax expenditures, tax provisions, that are directed to every imaginable economic activity or interest, from bow and arrow manufacturers to horse racing, from rum manufacturers to yacht owners. As a budget watchdog, we obviously think eliminating many of these provisions that have spread like weeds since the 1986 reform would be a sound foundation of any tax reform effort. But we have limited our presentation today to those that have a negative environmental impact.

There are several key factors to remember about tax policy. One is, believe it or not, the second law of thermodynamics. If you recall from science class, this law details entropy. All matters moved from an

ordered state to a less ordered state. Well, there's tax entropy. No sooner do you clean up the tax code, like in 1986, than complexity creeps back in. Provisions like the sales tax deduction have come back to life like a zombie in a cheap horror flick.

Some have estimated that there have been 10,000 changes to the tax code since 1986. It seems that every effort by Congress to tweak the tax code ends up creating a host of new, convoluted tax provisions. Last year, for example, Congress passed a bill to fix a \$5 billion trade-distorting subsidy. This mushroomed into a \$140 billion behemoth that included hundreds of unrelated tax provisions.

We cannot afford to throw up our hands and give up in the face of tax entropy. A pock mark- scattered tax code invites confusion, increases costs, reduces transparency and generally engenders skepticism among the populace that everyone is paying their fair share.

There is a final critical point to remember about the tax code. No fix, no change, is ever easy. In this day and age, every tax expenditure and provision has a constituency behind it. No matter what, eliminating any item in the tax code will gore someone's ox.

As we all know, taxes are not only intended to pay the bills of the federal government; they are also designed to influence our behavior.

Exceptions to income and excise taxes are meant to encourage certain activities.

Years ago, we decided we wanted to become a nation of homeowners, so we made interest paid on a mortgage deductible from income tax—you can't deduct rent payments—creating a clear incentive for home ownership and for getting a mortgage.

When considering tax expenditures that harm the environment, there are a few general categories. One is expenditures with relatively direct impacts; subsidies for extractive industries, for example. I'll borrow from the game of billiards for the second category and call them bank shots. You have to think about these a little bit more carefully to see the impact because it's at least a two-step process. The SUV business tax break that Craig mentioned is one such example. Finally, there are the mixed signals or cross-subsidies that end up sending the wrong signal to the taxpayer. I'll start with the direct, which almost exclusively will be a discussion of energy-related tax breaks.

The American economy depends heavily on fossil fuels, in part because federal tax policy has always kept conventional sources inexpensive. The impact of these subsidies are quite clear. The U.S. uses four times as much oil as any other nation, and fossil fuels add up to more than 85 percent of the energy used domestically.

It is hard to imagine a sector that benefits from the tax code as much as the energy industry does. Some of the tax benefits include accelerated depreciation of assets, tax credits for production at marginal wells, and immediate expensing of intangible drilling and development costs. The

tax code's generous expensing of exploration and development costs for environmentally-harmful extractive industries alone will cost the federal government more than \$17 billion over the next five years.

As a federal fiscal instrument, tax policy is supposed to be used to correct a problem in the marketplace or to reach some type of social or fiscal objective. Yet, in reality, energy tax policy has been driven by politicians' desires to prop up their favorite industry, assist special interests or help trade associations make their members richer, rather than creating true incentives to push the industry to find bigger and better ways to drill or conserve more energy.

Because of this influence, tax policy generally creates new distortions by intervening in the marketplace rather than fixing current problems. At the same time, tax policy has not reduced our dependence on foreign sources of oil.

The percentage depletion allowance lets certain oil and gas producers claim a tax write-off when the value of their assets decline over time; that is to say as their wells are depleting. If a well's percentage depletion exceeds certain thresholds, the producer can carry the deduction over to future years until it is fully utilized. Firms can actually deduct in excess of their original investment in the well. This lucrative tax provision will cost the federal Treasury about \$3 billion over the next five years, and it leaves certain oil and gas producers with an effective tax rate that is much lower than other

industries. A related percentage depletion allowance for hard-rock mining will cost taxpayers an additional \$900 million over five years. Proponents argue that percentage depletion write-offs help create economic incentives to get energy companies to produce more oil and gas domestically. But with oil hovering around \$50 a barrel, many wonder why the oil and gas industry needs any government incentives at all. They already have all the financial incentives that they need. In 1980, Congress established a tax credit in Section 29 of the Internal Revenue Code for companies producing fuels from non-conventional sources, so-called "syn" fuel, synthetic fuels. After the oil shocks of the 1970s, proponents argued that the credit would increase development of alternative domestic energy sources. Section 29 applies to fuels such as oil produced from shale or tar sands, gas produced from pressurized brine, Devonian shale, tight formations, biomass and coal bed methane, all of which were deemed uneconomical for conventional purposes. The initial tax credit was \$3 per barrel of oil equivalent, or \$.50 per thousand cubic feet of gas, and designed to phase out as prices rose to \$29.50 a barrel. Those were the days. However, both the credit and the phase-out were tied to inflation. Currently, the credit is worth more than \$6 per barrel and more than \$1 per thousand cubic feet of gas, and oil prices must reach \$60 for the phase-out to occur. Despite oil being in the

\$50 range, producers still have been able to claim this credit. This tax credit will cost \$4 billion over the next five years.

Unlike private or investor-owned utilities, public utilities are exempt from federal income tax on income earned from the facilities for generation, transmitting or distributing electricity. This tax expenditure can lead to increased consumption and inhibits competition in the marketplace with private power. Eliminating this provision could save \$3.6 billion over the next five years.

I'll leave it there, but trust me, there are many more. As you can see, for decades every energy or other extractive industry has fought to get their piece of the tax policy pie. Some believe that the nation's distorted tax priorities can be balanced by adding additional breaks that favor new energy sources or sustainable activities that are currently underrepresented in the nation's tax code.

So you end up with credits for electricity production from renewable resources, credits for investments in solar and geothermal facilities, and other scattered credits. Instead of nibbling at the edges of tax policy through small provisions, we believe that government should eliminate all tax subsidies and let the market take its course.

The only way that you can level the playing field is through subtraction and simplification in the tax code. For all the advocates of renewable energy out there, unfortunately you will always be out-manned and out-gunned by the forces of big energy.

Even tax expenditures purportedly written for the environment can have little impact, or even worse, unintended consequences. The much-touted \$2,000 tax credit for hybrid vehicles appears to be having very little effect. Given that demand outstrips supply for these vehicles, all this expenditure is achieving is reduced revenue and added complexity.

I'm going to move toward bank shots. Under current tax policy, business purchases of large sports utility vehicles are given a \$25,000 tax deduction. The original intent of this provision was to increase capital investment by farmers and other small business owners who rely on light trucks or vans.

When this provision was added to the tax code, luxury passenger SUVs were not the market force that they have become, and it appeared a good way to help small business owners by accelerating depreciation and avoiding luxury tax surcharge.

The tax code classifies vehicle by weight instead of function, so a truck or van is defined as a vehicle that exceeds 6,000 pounds. Before the advent of the luxury SUV, this was a sufficient way to separate passenger vehicles from other classes of vehicles. But the growth of the market for these large SUVs has dramatically expanded the number of passenger vehicles weighing over 6,000 pounds. In addition, the weight classification for passenger vehicles is determined by the vehicle weight with nothing in it.



SUVs' weight, on the other hand, is calculated using the gross vehicle weight rating, which is the vehicle weight plus the load that it can carry. This makes it easier for SUVs to achieve light truck status even if the actual weight is more in line with passenger vehicles.

The SUV break has been reduced from \$100,000 to \$25,000, as Craig had mentioned, but it should still be eliminated. Tapping all the breaks and deductions that are available, buying a \$100,000 SUV, like an H-1 Hummer, still brings \$58,000 in tax deductions. This break isn't helping reduce our dependence on foreign oil. In fact, it's obviously doing the exact opposite. Expensing all business vehicles equally will save the federal Treasury \$700 million over five years.

Interest payments on second-home mortgages qualify for a tax deduction. Where do people most often buy a vacation home? In remote or environmentally-sensitive areas. When my parents took the money that they saved for my college education and bought a vacation home, they bought it in the hills of Vermont.

You may be wondering there's some uneducated guy talking to you, but I actually went to the Coast Guard Academy, so actually we all paid for my education to some extent, and thereby my parents' down payment.

This deduction helps people buy more permanent, more elaborate homes, in more environmentally-risky areas than they otherwise would.

Another interesting note on this tax expenditure: The provision is more expansive than many people realize. Anything with basic living

accommodations qualifies. That means RVs and boats may also qualify for this deduction.

Real estate taxes are also deductible for all of your homes—first, second, third, fourth. It doesn't matter. This has many of the same impacts as the second-home mortgage deduction. Eliminating this provision will save \$74 billion over the next five years for the primary residence alone. Tax expenditures inherently send many mixed signals. Attempts to influence behavior do not necessarily have the intended impact. For instance, the primary effect of creating a shelter to encourage savings may actually have its greatest effect of shifting savings from one type to another, with only a small increase in the overall savings rate.

Other mixed signals provide cross-subsidies that do not provide the purported incentives. The harbor maintenance tax is, in effect, a cross-subsidy between high- and low-maintenance ports. If eliminated or replaced with a true user fee, which the HMT is purported to be, costs in environmental damage could be significantly reduced.

The HMT is an ad valorem tax; that is, a tax on the value of the commodities shipped, which actually has little to do with the cost of maintaining the port. The major cost factor in maintaining ports is dredging sediment from the channel, disposal of which can have significant impacts on the environment.

By taxing a container ship full of plasma TVs entering the port of Seattle, a naturally deep, low-maintenance port, the same amount as a similar

ship entering the port of New York, a significantly shallower, higher-maintenance port, we're providing expensive, environmentally-harmful cross-subsidies. The harbor maintenance tax is expected to yield roughly \$5 billion over the next five years.

A more equitable and environmentally-sound proposal would be to eliminate the HMT and establish a true user fee based on vessel draft and the costs to maintain the port that they call on. A stop at the port of New York will cost significantly more than a stop at the port of Seattle. This reform would discourage heavy traffic at high-cost ports that require frequent dredging and shift traffic to ports that are less costly to maintain economically and environmentally.

I've left for last what I'll call the big kahuna. And you'll have to forgive me. I just got back from two weeks in Hawaii, so I've got that Hawaiian language going. But, arguably, the most popular tax expenditure is the mortgage interest deduction which allows taxpayers to deduct interest on up to \$1.1 million of a debt they accrued to buy, build or improve their homes. This tax expenditure was created to encourage Americans to buy homes, as I mentioned before.

The concept that property ownership creates a stake in society far pre-dates the Republic. However, this tax expenditure which I, like many Americans, use also provides a significant incentive for newer and bigger development and sprawl. Even reducing the size of this tax expenditure by either eliminating the deductibility of second-home mortgage interest

or the amount of interest deductibility would reap significant savings.

This tax expenditure comes to \$425 billion over five years.

So I've highlighted only a few of the myriad of tax expenditures that affect the environment. In many cases, tax simplification by subtraction, the elimination of certain tax expenditures, would help the environment and our pocketbook far more than big spending programs.

Taxpayers for Common Sense urges the President's Advisory Panel on Tax Reform to look closely at many of the expensive tax expenditures that could be eliminated to increase federal revenues in these tight budgetary times, while helping the environment.

Thank you very much.

[Applause.]

MR. METCALF: Well, it's a pleasure to participate in this panel on tax reform and the environment, and my thanks go to Bill and Craig for organizing it, inviting me to participate.

Craig has introduced the idea of tax shifts as part of his broader message on the relationship between taxes and the environment. I'd like to focus on tax shifts in more detail, and I have two points really to make in my presentation.

The first is that the United States lags behind most other developed countries in its use of environmental taxes as a component of the tax system. And, second, our failure to use environmental taxes means we

are missing important revenue opportunities which could help us tackle knotty fiscal issues in our federal budget.

So my overall message is that green tax shifts can provide considerable flexibility to policymakers to help achieve difficult political and economic goals, while contributing to a cleaner environment.

So the first point I want to make is that the United States collects little in the way of revenue from environmental charges and taxes. Even if we include taxes on motor fuels, which are strictly speaking not an environmental tax, environmental tax collections are trivial in the federal budget.

In fact, it probably helps to do a bit of a comparison with other developed countries, so here are a few comparison statistics. If we take tax collections at all government levels, state, federal and local, the United States collects 3.3 percent of its taxes through environmental taxes. This is in 2001.

By contrast, OECD countries as a whole collected 4.9 percent of taxes through environmental taxes or levies of one form or other. Looking at individual countries, Germany's environmental tax share was 7.1 percent, the UK was 7.5 percent and Denmark was 10 percent. No country's environmental tax share was lower than the United States' share in 2002. So, in short, the United States is at the very bottom of the distribution among developed countries in its use of environmental taxes, and there is

considerable scope for increasing our reliance without creating competitive problems with other countries.

So let me then turn to my second point, which is how might we bring about a green tax shift in this country, and here I'd like to discuss three examples to illustrate how we could bring about a green tax shift to help achieve important fiscal policy goals.

So my first example draws on a study that Kevin Hassett at the American Enterprise Institute and I did a few years ago which explored instituting a carbon tax to finance corporate tax integration which eliminates the double taxation of corporate income.

The idea of a carbon tax combined with a reduction in existing taxes has been extensively studied. The focus on a carbon tax is a natural one, given rising concerns about global warming as well as the fact that it can be a big revenue-raiser.

A natural question is what do we do with the carbon tax revenues, and research by a number of economists has indicated that reducing the tax on capital income with revenues from a carbon tax would provide the greatest efficiency gains relative to other uses of environmental tax revenue. And corporate tax integration is a way to reduce the tax on capital income.

So corporate tax integration is a way to subject all income to a single income tax. The United States, like many countries, has a corporate income tax and then a personal income tax, and treats these two taxes as

separate and distinct. So income earned in the corporate sector is first taxed at the corporate level and then as corporate after-tax income is distributed, it gets taxed again at the personal level. And this leads to a number of tax-induced behaviors which can have significant efficiency effects. And there have been a wide range of studies of the impact of the corporate income tax and the high taxes on capital income in this country which suggest that the distortions are quite large.

Now, one of the objections to tax integration is the cost, and the impetus behind the analysis that Hassett and I did is that the cost of integration can be paid for through a carbon tax and this would be desirable on both environmental and efficiency grounds.

Now, we focused in that paper on the industry impacts of this green tax shift. Industries will be differentially affected by integration. For example, we would expect industries with a high corporate payout rates would benefit from integration, while industries dominated by a non-corporate organizational form would least benefit.

Meanwhile, the carbon tax most impacts carbon-intensive industries, and so a green tax shift that uses a carbon tax to finance corporate tax integration could have fairly different industry impacts as you look across the industries and this was what we wanted to look at.

Now, I'm not going to get into the details of the analysis. I think copies of the paper are available. The critical point I will say is that when we levy new taxes or raise or lower taxes, taxes on business can be shifted

forward in the form of higher product prices or they can be shifted backwards in the form of lower factor returns, returns to shareholders or wages to workers. And there's not complete agreement about whether tax reform of this type would lead to forward shifting or backward shifting. And so we first looked and asked, well, what if the tax impacts from this green tax shift were fully passed forward in the form of changes in industry product prices, and we found considerable variation looking across industries.

Of the 50 industries we tracked in our analysis, 29 industries faced price increases through the reform and 21 faced decreases. Petroleum, coal mining and utilities, not surprisingly, are disproportionately impacted by a carbon tax, with price changes in the range of 6 to 12 percent in our study.

Beyond those industries, the price changes were pretty modest. For those industries with price increases, they range from essentially to zero to a little less than 2 percent, whereas price decreases ranged as high as about 1.8 percent. And the big winners through this reform were, not surprisingly, service industries, finance and other service-intensive industries.

Now, the other way we looked at the analysis was to ask, well, there's a lot of concern about what happens to owners of utilities. They're going to take a big capital hit with a carbon tax—coal mining, utilities and petroleum industries. And so we asked, well, for these three industries



that are most impacted by a carbon tax, how much of the carbon tax has to be passed backwards to shareholders in the form of lower returns before these industries become losers in the sense that the market value of these industries goes down.

And we found that so long as no more than 5 percent of the carbon tax was passed back to equity-holders in the form of lower returns, then, in fact, the market value of these industries would not fall as a result of this reform.

So summing up what our study, I think, shows is that tax integration financed by a carbon tax can blunt to some extent the price increases that arise from a carbon tax, but that there is a considerable amount of variation across industries, but that the impact on the market value of industries need not be that large.

In terms of numbers for what it would cost now, estimates for corporate tax integration—10-year estimates are in the range of \$266 billion. That would require a carbon tax—you could pay for that with a carbon tax that started out at roughly \$15 a metric ton and rose over a 10-year period to about \$23 a metric ton. And a \$15-per-metric-ton charge would be roughly 3 to 4 cents in the price of gasoline, which is noise in the current price changes we're looking at.

Let me turn to a second example, and this focuses on distributional objectives. The President's Advisory Panel on Federal Tax Reform is charged with thinking about ways to simplify tax collections and enhance

efficiency in a revenue-neutral context. But environmental taxes can also be used to achieve distributional objectives, and whether this a goal of the panel or not, the broader message in this example is that environmental taxes give lawmakers considerable flexibility to achieve a variety of goals, given the fiscal constraints under which they operate. A study I undertook a few years ago asked how we might carry out a revenue and distributionally-neutral green tax reform, and so I studied a green tax shift equal to 10 percent of federal revenues and modeled a carbon tax and a variety of other taxes and used the revenues to lower other taxes in the tax system.

And the point I want to make from the analysis, rather than focusing on specific tax rates or amounts collected, which I think is probably less important than the message, is that there is certainly a common concern that environmental taxes are regressive; that is, they fall disproportionately on low-income individuals and households. And my analysis certainly confirms this result when looking at environmental taxes in isolation.

But I then modeled a variety of tax reductions, including such things as an exemption from the payroll tax for the first \$5,000 of the tax base for workers. I looked at refundable tax credit for each exemption in the personal income tax. In other words, I looked at ways of cutting taxes that would add some progressivity to the system so that the new result was a distributionally-neutral green tax shift.

Now, the point is not to make a case for this particular reform, but rather to emphasize the point that while environmental taxes may be regressive, an environmental tax reform can have whatever degree of progressivity policymakers choose. Any regressivity in the environmental tax can be offset by progressivity in the tax reductions. And the broader point in the context of the advisory panel's work is that environmental taxes provide an additional instrument to achieve whatever goals the panel has. Now, as my last example, let me turn to cap and trade programs like the SO<sub>2</sub> trading program for electric utilities. Cap and trade programs have some very desirable properties. They're market-based systems, provide great flexibility of firms.

How permits are allocated is an important issue in the design of the program; in the SO<sub>2</sub> trading program, grandfathered firms allocating permits to utilities on the basis of historic pollution levels. Now, grandfathering may make permit programs more palatable to affected industries, but it means the government forgoes valuable revenue it could collect by selling permits to the firms.

Now, proponents of grandfathering argue that the—take the SO<sub>2</sub> example—electric utilities are burdened by the restrictions in SO<sub>2</sub> emissions that arise from setting caps lower than historic emissions levels. But the analysis that Hassett and I did suggests a flaw in the argument.

To the extent that higher costs due to the need to purchase the permits are passed forward into higher product prices, the market value of the industry is unaffected by the permit policy. In fact, research has shown that a cap and trade system in carbon emissions that led to a \$25-per-ton price on emissions would only require grandfathering about 15 percent of permits in the oil and gas industry, and perhaps remarkably less than 5 percent in the coal industry.

The reason is that supply is sufficiently more elastic than demand that the bulk of the cost is shifted forward to consumers in higher product prices. So there's little burden on the industry in terms of the market value, and one hundred-percent grandfathering really overcompensates the industry. Now, these observations suggest that the vast majority of tradable permits in future cap and trade programs should be auctioned rather than given out. But what should we do with current programs where we've already given the permits out or committed to giving them out? Well, we could change the rules and begin to auction them in the future on an annual basis, but this might be complicated, given the banking and forward purchase of permits that has occurred in the system.

Alternatively, Congress could enact a permit exercise tax. This would be a tax levied on any firm that used a permit in order to emit sulfur dioxide, focusing on SO<sub>2</sub> emissions. In other words, this is a tax on the right to exercise your permit.

In 2003, electric utilities emitted 10.6 million tons of SO<sub>2</sub> emissions. So a permit exercise tax of \$250 per ton could raise roughly \$2.6 billion annually. And this tax would capture a significant fraction of the economic rents that are generated by giving the permits to utilities in the first place.

So to conclude, there are two points I want to emphasize. First, the United States relies to a much lower extent on environmental taxes than do other developed countries and we have considerable scope for green tax shifts before we put ourselves at a competitive disadvantage with, for example, the other OECD countries.

And, second, a greater reliance on environmental taxes can provide considerable flexibility for policymakers to achieve difficult political and economic goals, while contributing to a cleaner environment.

Thank you.

[Applause.]

MR. FRENZEL: Thank you. I will proceed from a seated position, being a thoughtful, sedentary type. Anyway, the discussants should have less problems than the presenters who had to do all the hard work.

I have a couple of thoughts on the work of these three worthy gentlemen who gave us some wonderful ideas this morning and I'll start with one that I learned here at Brookings from one of the previous inmates, a chap by the name of Bill           ?           , who use to remind us that the tax

systems are for raising money for government, not to dictate social behavior.

And that would indicate for Steve that getting rid of the bad preferences, as he defines them, would be good under that dictate, but adding good preferences would not be such a good idea. What we know in taxes is that none of us are purists and preferences creep into the tax schedule. So I guess we can look them all right in the eye.

I believe one of us—maybe it was Craig, maybe it was Steve—indicated that there have been 10,000 changes in the tax code since 1986.

Testimony before the President's Advisory Panel indicated 14,000. I haven't counted them, but there are lots. They'll continue to be moved around.

One would also think at this point that if you looked at current legislation in the Congress, the energy bill being one of them, I think you'll find a large number of preferences. And it probably would not fill your heart with joy if you contemplate what that's going to add to the tax code.

On the other hand, tax reform, if we look at 1986 as one of our models, is usually a process which cleans out a lot of the preferences. And so maybe that's a special opportunity that doesn't come along but perhaps every 15 or 20 years, and so that may be a good place to work.

Some of these preferences probably don't work out as grandly as Steve suggested. He talked about the hybrid car tax credit. I bought a hybrid car and I was attracted to buying it by the thought that I would get this

luscious tax preference. Unfortunately, there's an offset against the alternate minimum tax. Before I bought it, my CPA told me that I would get no tax credit and I did not.

But I bought it anyway. It's a nice, cheap, serviceable car. It performs well. And so he's probably right. We probably don't need those tax credits. I understand anyway they're mostly sold to rich Hollywood types who probably didn't need the tax credit in the first place. I hope that also applies to the SUV credit, but I really don't know that.

Craig reminded us that taxes and the environment are related. The problem, I think, and one of the reasons for this conference is they aren't very well related in the public mind. We haven't had enough of these kinds of discussions to get the public energized and thinking in terms of relating taxes to the environment. We need a few matchmakers on the political front, both legislative and executive. And, there, I think it is fair to say that the Congressional majorities are not terribly known for green ardor. And so, there, I think the economic arguments have to be made first.

Another thought I had as I listened to these fine presentations was that new taxes—this relates more to Craig's and Gil's presentations—for whatever good reason we install them, have been of late a political no-no. The policymakers have been much more interested in cutting taxes than in creating new ones—again, a good reason for the promoters of these

kinds of policies to work harder to build some kind of a constituent base so that we can proceed in these ways.

And if we are going to use the economic bases, we're going to have to look at the green taxes, whether they're preferences or new taxes or whatever, from a basis in which we can quantify the costs and the benefits, and make sure that there is a good economic reason for proceeding because I think most policymakers would be delighted to do what one of our speakers called leveling the economic playing field.

I think the Metcalf presentation was of particular interest because here he took an exact, specific tradeoff between integration of corporate taxes and a particular green tax, the carbon tax. And he was quick to point out there is a distribution of burden problem, depending on which burden models you use and how you do your economic thinking. Nevertheless, it looks like a shift from higher-income taxpayers to lower-income taxpayers.

Then he had the ingenuity to explain to us that, well, the income tax isn't the whole of our tax system and if you use it to offset Social Security and other employment taxes, you can probably level that burden to where it doesn't exceed what we are undergoing today.

But again this shows, I think, that while there are advanced thinkers like Dr. Metcalf and Dr. Hassett loose on the land, there is not a lot of thinking, there's not enough writing being done in this area. And so we



really need a great deal more discussion and research on all of these matters.

On the President's Advisory Panel on Tax Reform, there have been a number of long days of hearings by economists, tax practitioners, corporate types, academicians, people who purport to know something about taxation. In addition, we have invited members of the general public to present tax ideas to us either by e-mail or in writing.

And out of hundreds of submissions, the staff tells me that we've received only three that mention the environment. One of them was already mentioned here. It was Duke Power's advocacy for the carbon tax, which was a very strong statement and a good one. One was sort of an oblique reference to OECD matters, and the third was by an individual citizen, I think, an electronic submission which merely indicated that there may be some environmental tax preferences that we might want to apply.

That doesn't give the panel a lot of grist for its mill. We are just getting started, and I guess that's a great ad for this conference and I hope many others that will follow.

Thank you.

[Applause.]

MR. PORTNEY: Bill, thank you.

In case you're having trouble keeping the speakers straight, I'm the genius that's moving to Tucson, Arizona, on July 1st, a day on which it

will be hotter there than it is in your Weber grills over the past Memorial Day weekend.

I want to say thanks to Bill and to Craig and to Brookings and WRI for hosting this event. I commend them for doing so. I want to thank the paper authors—Steve, Craig and Gib. I learned a lot from reading these papers, as I have from looking at work that they've done before.

And I should also give credit to my colleagues from Resources for the Future, particularly Dallas Burtraw, Ian Perry and Richard Newell, whose work on taxes and the effects of taxes on electric utility rates and the patterns of emissions and the rate of new innovation in the economy has taught me tons over the years.

I want to give a little bit of personal history, and it's particularly appropriate that this event is being held here. I came to Washington in August of 1971, 34 years ago, to the Brookings Institution as the lucky recipient of a dissertation fellowship. I was finishing my Ph.D. at Northwestern and I finished the last year of thesis writing here at Brookings.

My dissertation advisers here at Brookings were Charles Schultz, Arthur Okin and Joe Peckman, and don't think for a moment that I've ever forgotten how fortunate I am to have had three such outstanding economists and public servants as those three guiding me in my final year of thesis writing. I mention this with particular respect to Joe Peckman, and I'll come back to why in just a second.

After that year at Brookings, a year in which I met people at Resources for the Future because we rented office space at that time in the Brookings Annex, I took my first job after graduate school at Resources for the Future, where I was a protégé of sorts of the late Allen Kneese, the economist who I think is most responsible for having kept alive the idea of using economic incentives like taxes on pollution or marketable discharge permits as alternatives in environmental policy to command and control regulation.

Now, although the work of Joe Peckman and Allen Kneese never intersected, these two guys had one thing in common that I want to emphasize because it's germane to the discussion that we're having. They both were very firm believers that if you had a good idea, you stayed with it, regardless of the fact that people may have been paying no attention to you or in some cases even ridiculing you for the good idea.

In Joe Peckman's case, he was a believer that we need to change the tax code by taking out a lot of the loopholes of the type that Steve Ellis has pointed out have crept back in, take out the loopholes so that we could reduce tax rates significantly from marginal tax rates that were in the high 50 percent, if I'm not mistaken, down to marginal tax rates that are now in the mid-30s.

And Joe wrote the same book with a fellow named Ben Oakner [ph] every year, in which they simulated the economy again with more recent data and pointed out the advantages of this kind of tax simplification. And

every year people kidded Joe and said why are you doing this? This will never work; no one will ever pay any attention to it.

And in 1986, the Senate tax committee and the House Ways and Means Committee were basically stuck in tax reform. They didn't know what to do. The tax system was a mess, and they said, well, gee, people have been writing about tax simplification for all these years and we've got 15 or 20 of Joe Peckman's and Ben Oakner's books explaining how we do this. Let's take those books off the shelf and use that as a blueprint for comprehensive tax reform.

And that's just what they did, and all of hard work and time that Joe Peckman put into keeping that idea alive paid off in 1986.

Switch back to Allen Kneese at Resources for the Future, who testified before Senator Edward Muskie, who said, Professor Kinesa, do you really believe in a system in which we tax pollution or sell the rights to pollution? Do you think that this system would ever work? And Alan patiently explained why he not only thought it would work, but would produce bigger emission reductions for less cost than the system we were currently putting in place.

And, of course, in 1990, in the Clean Air Act Amendments, we instituted a system of tradable emission permits for SO<sub>2</sub> that has resulted in bigger SO<sub>2</sub> emission reductions than we were getting under command and control regulation on a faster schedule and about a third the cost that we would have paid under the old system.

So I mention these two precursors, linked in some ways and with my own personal history, because the notion of using environmental taxes as an augmentation to existing taxes, I think, is a hell of a good idea.

I'll declare an interest in this, as they say in the UK. I'm a believer that the way to go about dealing with environmental problems and revenue shortfall problems is through a carbon tax. I've written about this with my colleague, Dallas Burtraw, fairly recently. So I'm not a totally neutral observer on the subject.

But I want you to remember that good ideas will have their time come at some point, and this is a good idea. Mark my words, I may be long gone from this earth by the time it happens, but I hope some of you who are young here will say I looked at this old geezer up on the stage at Brookings and he said we would actually tax carbons at some point in lieu of or as a way to augment revenues.

I want to make two general observations about the papers taken together rather than discussing them as individual papers as one might at an academic conference, and I don't think that the paper authors will object to this.

First of all, in both Craig's paper and Gib Metcalf's paper, less so in Steve's, there was a lot of talk about revenue neutrality. What taxes could you reduce if you instituted environmental taxes? And I want to say, guys, we don't need revenue neutrality. We need revenue positivity, okay? Remember that.

The budget deficit last year was \$412 billion, and looking at a Brookings book that Belle Sawhill and Alice Rivlin edited last year making very reasonable assumptions about the likelihood that Congress would extend what are so-called temporary tax cuts and making some assumptions that Congress will do something about the alternative minimum tax, in 2014, according to Brookings, the deficit will be nearly \$700 billion.

And if one then makes some assumptions about the numbers of people that will be retiring and collecting both Social Security and Medicare, and assumptions about the rate at which Medicare expenses will increase, very conservative assumptions, we could be looking at budget deficits on the order of \$1 trillion, and that is a serious economic problem that we have to pay attention to.

So when we talk about environmental taxes, I don't want to do in an apologetic way and say that, well, if you tax these pollutants, we could use that to undo other taxes. We need more revenues, and I think we need to talk about environmental taxes as augmenting existing taxes, not as a substitute for them.

To give you a sense as to how awkward it is to have this discussion, here we are in a country, the United States, where the growth increment in GDP from year to year, the amount by which GDP increases, just that increase, is bigger than the GDPs of Brazil, India, South Korea, Australia or Russia.

Another way to put that is if you just took the growth in GDP in the United States from year to year, it would be the 11th largest economy in the world, okay. And yet this is a country with a GDP of that magnitude that has a \$412 billion budget deficit last year, and going up. That's why we need to be talking about environmental taxes as augmenters to the existing taxes that we collect.

The second observation I want to make—and again I'll remind you that I am a proponent, as Craig and Gig and Steve probably are here, of environmental taxes. I do want to say one thing. When one reads these papers and listens to the presentations, it makes it seem like we can tax bads rather than taxing people as either suppliers of labor services or savers.

And I want to remind you that taxes on pollution indirectly are taxes on capital or labor. After all, there's no Mr. Carbon out there that we can tax, or Ms. Nitrogen. There's no Sulfur family that will send its income tax return for 2005. So when we tax pollution, indirectly we're affecting suppliers of labor or savers.

And the way I like to think of this is by saying that if we tax pollution, the firm that has to bear that tax can do one of three things, and in my view, only one of three. The distinguished colleagues up here should correct me if I'm wrong.

They can pass the taxes on in the form of higher prices, which they'll do if they're not in an intensively competitive market, in which case that

pollution tax is paid by people who buy electricity or cars or anything with steel or chemicals in it, et cetera; that is to say more or less by all of us.

Second, the firm might say, gee, this tax on pollution makes it so expensive for me to do business that I'm just going to close up. And this happens once in a while, not as often as the business community would suggest, but it does happen once in a while, in which case that tax on pollution is borne by laborers, the suppliers of labor who at least temporarily are out of work.

Third, the company might say, okay, we're going to have to eat this tax, in which case it's borne by the shareholders of the company, or, depending on the belief that you have in tax incidence, by all owners of capital.

So I don't think we should pretend that there's a way to raise taxes that doesn't have an adverse impact on ourselves as individuals. The pattern, the individuals that bear that burden will be different, and I think Gib suggested that a little bit. But remember, all taxes are ultimately borne by people and there's no way that we can avoid that, and I think we need to sort of keep that in mind.

One other point I want to make about the carbon tax which came up several times. Both Gib and Craig mentioned it. Again, I'm a proponent of this. They talked about how small a carbon tax of, say, \$25 per ton of metric carbon equivalent would be in gasoline, saying that \$25 a ton is



about 5 or 6 cents a gallon, which obviously in the context of recent price increases is quite trivial.

But remember, that \$25-a-ton tax on a metric ton of coal has a much bigger impact on electricity generated from coal. It wouldn't be an unnoticeable change as it is in the price of gasoline. It would be a big hit in the electricity bills of people whose electric utilities generate electricity using coal—just another illustration of the fact that taxes are borne by people and we can't hide from the fact that even environmental taxes which may make sense for a lot of reasons ultimately end up adversely affecting people.

This is just further confirmation of what I like to think of in my own mind as Portney's axiom, and that is show me a win-win policy and I'll show you a loser, okay, because there is a loser, sure as shooting, for every win-win policy, and that's the case here.

And I think those of us who are proponents of environmental levies as a way to raise new sources of revenue need to acknowledge that there are people that will lose and maybe think creatively about how to compensate them.

So again I want to compliment Craig, Gib and Steve for writing papers that were provocative and interesting to me and made me think more about this. And I look forward to the discussion that we'll have.

Thanks.

MR. GALE: Thank you.

[Applause.]

MR. GALE: All right, we'd like to—Bill Frenzel mentioned—let's have the mike up here—Bill Frenzel mentioned that the environment and the tax cultures are sort of separate. One of the differences I've noticed in today's talk is that the environmental people actually stay on schedule, which is nice.

We want to turn to general discussion. I'd like to ask David Sandalow first—David, as I mentioned earlier, was instrumental in organizing this event and he graciously agreed not to be a speaker so we had room for these other gentlemen. So I won't emphasize that he needs to keep his question short, but I will emphasize that other people should first of all use the mike, second of all, keep your questions short, and, third, make sure you have a question.

Thanks.

MR. SANDALOW: Thanks, Bill, and thanks to all the panelists and discussants for a very interesting discussion. I've got a two-part question.

First, for Bill Frenzel, how should—what's the best way to influence the tax reform commission's work at this point by introducing some of these ideas? And indeed after the tax reform commission's work is done, what's the best way to introduce some of these ideas to Congressional committees, in your experience?

And then based upon Bill's answer to that question, I'd like to hear from the panelists and discussants whether the body of information that Bill is pointing at exists right now, and if it doesn't, what does it take to generate that information.

MR. FRENZEL: I, of course, cannot speak for the tax panel. I only speak for myself. Our panel has been, however, receiving information and will continue to do so as it works along. We are literally hip deep in information at the moment and our eyeballs are spinning trying to review it all.

But if there is information such as that that was presented today, I think it would be a good thing to go to the tax panel's website and send in whatever suggestions or papers you have electronically. I think that's the best way to do the job.

Admittedly, it's late in the game. We haven't made any decisions yet, I think it's fair to say, but we've done a lot of thinking and talking about these matters. But later is better than never, I guess is the way to describe it, and so that material ought to be presented, particularly specific ideas with whatever specific economic research might accompany it.

When the matter gets to Congress—well, first of all, the commission has to report to the Secretary of the Treasury. He, in turn, will report to the President, perhaps incorporating some of his own ideas. The President

may or may not then submit a proposal of his own, which may be like his commission invented or may be his own ideas, to the Congress.

But that's when the food fights begin, and it is at that point where the usual lobbying procedures prevail. And people who are in support of these kinds of ideas ought to be heard up there and they ought to be contacting individual Congressmen and members particularly of the tax-writing committees, because none of these are a given. The President may not like his advisory panel's recommendations. The Congress may not like the President's recommendations.

If you look in 1986 at the history of how things changed from the Don Regan first presentation through the Jim Baker second presentation, to the President's submission, to the Rostenkowski bill, to the Packwood-Bradley bill, and finally to the end, there were just a myriad of changes of direction. And so as Yogi says, it's never over until it's over, and so keep working the problem.

MR. GALE: Anyone else want to discuss whether there's a sufficient body of information to transmit to the tax reform panel?

MR. METCALF: Well, I think there's been a tremendous amount of research. Richard Newell has done some—I see him in the audience—Larry Goulder at Stanford. I've done work. A number of people have looked at both distributional issues as well as efficiency issues. I think there is a lot of material.

MR. GALE: Can you comment on the extent to which the literature speaks with a consistent voice on things like double dividends and distributional impacts and efficiency impacts, and Paul's comment about how, yes, it's a tax on the environment, but it's still a tax on labor and capital?

MR. METCALF: Well, I think the work that has looked at the distributional piece has very much taken the view that taxes are paid by people and has thought hard about the distributional impact.

My work, I think, has tried to—and I don't think I'm alone in this—tried to address the issue of how do we deal with the issue that environmental taxes typically are regressive. And I don't think it's controversial the view that an environmental tax reform—packaged correctly, you can get whatever degree of progressivity you want.

I think the other point about the double dividend that I think there is real consensus that using environmental taxes to lower capital income taxes buys you greater efficiency than if you want to lower labor taxes.

There's that equity efficiency tradeoff.

MR. PORTNEY: Bill, can I—

MR. GALE: Sure.

MR. PORTNEY: I'd like to jump in on that. I agree with Gib that there is a tremendous body of academic research that has been done that bears on this question. I think the shortcoming probably is using the analogy that I drew earlier to Joe Peckman's work on tax reform where he

basically wrote a book each year that didn't contain a lot of technical analysis, but said if you take this exemption out, if you take this out, here's how much money you'll raise, it was sort of, you know, a cookbook for somebody to use.

And I think that's probably what places like World Resources Institute and Brookings, and I hope my colleagues at Resources for the Future will think about doing in the future is sort of simplifying this so that you can see if you tax this at this rate, here's how much revenue you could raise. And implicit in that is also assumptions about how much revenue you would lose because if you tax pollution, it becomes economical for sources to reduce pollution, after all. That's one of the things that we want them to do, and so the revenue base erodes a little bit.

And one of the things that I think is misleading about the discussion on environmental taxes is it's often not coupled with a very sophisticated set of assumptions about the marginal cost of reducing pollution so that we would know how much of the tax base would disappear.

So, you know, I guess what I'm saying is that I hope that this significant body of academic research is simplified so that people on Capitol Hill who don't have time to wade through elasticities and general equilibrium calculations, which are certainly important, can sort of understand, okay, if we did this and this and this, here's how we would do it, here's how much revenue we would raise, here's how much the base might erode over time because people reduce pollution, et cetera. We kind of need a

Congressional handbook for how you would make these a part of the tax code, I think.

MR. : At least on the environmentally-harmful tax expenditures, I mean there is an existing Congressional handbook. I mean, every year the not so much read Congressional Budget Office puts out their budget options every year, which is, you know, a great source of looking at a lot of different tax expenditures, looking at a wide range.

It doesn't take an opinion, but provides a lot of good information about various tax expenditures. Definitely a good source for the direct hit, so to speak, rather than like [INAUDIBLE.] And JCT, the Joint Committee on Taxation, comes out with tax compilation as well.

MR. : Yes. I agree with Paul on his comment here that the need for some type of taking some of the information that's already out there—as Gib was mentioning, there's a lot of analysis out there—but maybe simplifying it or packaging it such that it's actually more easily communicable to the target audience. I think there's a gap for that right now.

MR. GALE: In the back.

MR. : Doug Obey [ph] from—can you hear me now?

I just had a question for anybody who wants to take this on the issue of a lot of this discussion is obviously geared toward the President's recommendations on tax reform. What, if any interest, do the panelists see on the Hill in incorporating any of this into the energy bill, where I

guess they're writing the tax provisions of that bill pretty much right now on the Senate side?

MR. : Can you speak up a bit?

MR. GALE: The question was about interest on the Hill, particularly in the current energy bill, in incorporating any sort of green taxes.

And you seem the right person to—

MR. FRENZEL: My guess it doesn't look that way to me, but I'm not a close student of it.

MR. : The energy bill has—there's virtually no interest particularly in the House of having ? in the energy bill. It's a lot of oil and gas. I mean, if you look at the overall cost of the bill—and we did an analysis and there's a significant amount of authorized spending. We're talking in the neighborhood of about \$90 billion.

But even when you look at the tax provisions, almost all of them are directed at the oil and gas industry, which is certainly not a green tax strategy.

MR. : Yes. Outside of the tax reform panel, I see the opening being—an opportunity for these ideas being more as Congress gets serious about dealing with the deficit situation, you know, over the next couple of years. So I think that's where you may see more of these opportunities for these ideas to be pushed and potentially getting traction.



MR. : Let me just jump in on that. The last time we seriously considered—the Clinton administration discussed BTU taxes at a time of very large deficits and efforts of fiscal restraint, and it basically felt flat on its face—the BTU tax, not the Clinton administration.

How do we factor that into what we think might occur, if and when Paul's good idea is ever going to occur?

MR. : Can I take a first crack at that?

MR. GALE: Yes, please.

MR. : Others who are more knowledgeable about this can correct me, but if you're a proponent of a carbon tax or any type of energy tax, the first question is, well, we tried this with the BTU tax and it didn't work. And my recollection is that that was a pretty failed experiment not because it was an inherently bad idea, but because shortly after they introduced the BTU tax as part of a comprehensive set of tax measures in which it was said everyone would have to bear some burden in order to deal with the deficit problem, somebody said, well, gee, now we've got to get some votes in the Senate, so we're going to exempt ethanol from the BTU tax.

And then somebody said, well, wait a minute now. How about electricity used in aluminum production, because we've got votes in the Pacific Northwest? And then said, okay, well, we'll take that out of the BTU tax. And before long, everybody else was thinking, hey, I'm the only schlemiel that's going to be paying the BTU tax.

And so right from the get-go, they began to sort of erode the idea behind it that this was part of a tax increase and expenditure reduction program that would spread the pain around and we would all have the benefit of getting the deficit in order.

So I don't really view that as, you know, a very fair test of whether or not a carbon tax that would be fairly applied and not have exemptions carved out right from the get-go might fare in Congress.

MR. GALE: Okay. Yes?

MS. : I'm Jill Barshee [ph]. I'm an economic policy reporter at Congressional Quarterly. And when I think about what Americans care about with the environment, they want to swim in clean oceans, breathe clean air, drink clean water. And other than by instituting new punitive pollution taxes, is there any way to get a really big, positive improvement in the environment by getting rid of some of these tax preferences?

Percentage depletion wells—I mean, you get \$3 billion. It doesn't offset even one year of AMT relief. Do you get a big environmental improvement out of something like that by getting rid of it?

MR. : Well, you do. You have to look a little bit further down the line. I mean, if you start looking at the other energy tax expenditures that I was talking about closing, you're going to see one is that oil and gas is going to become less artificially held down in the price. There's less subsidies going to the big energy companies which then will sort of

level the playing field and give a better chance for renewable resources and other approaches which have a smaller environmental footprint.

But I think that invariably these activities are going to have an impact, you know, whether you're talking about oil and gas development in the Gulf of Mexico, when you're talking about clean bodies of water. Or, you know, I mentioned and talked about the harbor maintenance tax ? oils it had deposited in the oceans off of the coast of the U.S., and the other taxes.

I think that you have to add them all up. And, yes, absolutely, if you look at the home mortgage deduction, there's a lot of money there. But other than that, it's really going to have to be whittling at these various subsidies and going at it that way.

MR. FRENZEL: Americans do want clean air and clean water, but they want to drive an SUV and have a fully air-conditioned house. In short, they'd like the free lunch that everybody in the world likes.

It does seem to me in this discussion we've focused on two ways of dealing with environmental taxes. One would be to reduce the deficit, sort of the call to sacrifice. My guess is that we'll wait a good long time before we ever get a lot of volunteers stepping up waiting to sacrifice. The other way to do it is as a part of some tax reform proposal, if it is something like 1986. It seems to me that that is more likely to happen. It may not be the most desirable way to do it, but it is likely to be the

first bus going by on which environmental taxes may be able to hitchhike. So that seems the most likely prospect to me.

MR. MITCHELL: Thanks, Bill. Gary Mitchell, from the Mitchell Report, and I've been working on how to frame this into a question and I think I can, but I want to say that this doesn't speak—my question doesn't speak specifically to the question of how you influence, for example, the President's commission and/or the Congress on the specifics of tax policy, but on a broader question, which is how does the environmental set of interests mainstream itself into economic vocabulary.

I was thinking on the way down here today the Bureau of Labor Statistics will issue its unemployment numbers, and Wall Street is sort of waiting for that and lots of other places are waiting for that. So there's a sort of an economic signal.

And I wondered whether there is some measure or some measurements of environmental progress, or I suppose degradation, depending upon how one views the unemployment numbers, for example, that could be issued with some frequency, whether it's monthly or bi-monthly, et cetera, that work its way into the vocabulary of public policy, something simple.

I also just want to say that having taken copious notes today, there are a couple of things that I know I will remember without any difficulty. One is Paul's observation about the year-to-year growth in the American GDP is itself the 11th largest economy in the world. And I also like the show me a win-win and I'll show you a loser.

So, anyway, long way around saying how does the environmental set of interests work its way into the vocabulary of—

MR. GALE: All right, thank you.

MR. : To your point, just a few months ago, in fact, the WRI, the World Resources Institute, in partnership with a number of different organizations, just started publishing and releasing a report called the Millennium Assessment, which actually looks not just at the U.S., but globally at global ecosystems—grasslands, the oceans, forests, et cetera, and looking at it actually not just in terms of hectares of forests deforested, et cetera, but also looking at it in economic terms in terms of the provisions that the environment actually provides to local communities and to nations, whether it's in terms of the national capital the country has in terms of its major industries, but also in terms of provision of fresh water, provision of clean air, provision of fish stocks and food for its inhabitants, et cetera, in an effort to kind of address what you're talking about, some type of a metric that on a periodic basis—it probably won't be every quarter, but on a periodic basis to say this is what's happening beyond just the general numbers you get from the United Nations of how many acres of forest they cut down, but more in terms of the economics of what does it mean for us in terms of what does the environment provide us economically.

So that is something that's brand new and is going to be a regular metric against which we can measure progress or lack thereof on the health of the environment.

MR. : You know, that's a very intriguing idea. When I think of the reports that come out of BLS, these are generally reports that tell us something almost instantaneously about income this year or production this year, whereas many of the environmental indicators we could come up with are telling us about something that's going to impact us down the line.

So, for example, if we were to, say, have a carbon emissions report on a quarterly basis, I'm not sure how people would react to that. On the one hand, a high level of carbon emissions could be viewed, oh, gee, we're not doing a good job. That's a negative. On the other hand, oh, well, we're producing a lot of stuff, so this is sort of a positive indicator in terms of GDP.

It's difficult to see how you link these environmental indicators as something that the stock market is interested in, and I guess that's the trick is to know how to do that.

MR. : The only other thing I would add is I think rather than just looking at reports, part of it is who the environmental community is talking to, you know. For instance, I work for a budget watchdog. I work on national security issues, I work on general tax issues, I work on agriculture, insurance, all sorts of different things. And so bringing me

to the table to talk about this issue broadens the perspective and broadens the discussion out a lot more.

I mean, on agriculture, for instance, you know, which isn't tax policy, but we're talking with all the have-nots in the current commodity system. So we're talking to fruit and nut growers, we're talking to hunger groups, we're talking to budget watchdog groups, we're talking to environmental groups. And so there's a huge left-right alliance, if you would, that's working on that issue, and I think that's the way that the environmental community is going to be able to get its message and these issues in a much broader perspective is talking to people about things that they already care about rather than trying to get them to care about the environment.

MR. GALE: Yes?

MR. NEWELL: Richard Newell, Resources for the Future. Correct me if I'm wrong, but my sense is that the main focus of the current tax reform effort is on federal personal income tax, okay. And one of the things that is apparently off the table is the big kahuna that Steve Ellis referred to kind of from the get-go.

MR. : ? what?

MR. NEWELL: The big kahuna is off the table, namely the mortgage interest deduction, at least from the President's perspective. And the focus within personal income tax is mainly on tax simplification, if I

understand at least what I've heard so far, so things such as moving toward a consumption tax or moving toward a flat tax.

And so what I'm curious about is what would be the environmental implications, if any, of choosing between these different types of tax simplification for personal income tax.

MR. FRENZEL: Well, we already had one of our speakers indicate an analysis of the VAT from a number of aspects to really give you an idea of how to proceed. And yet the panel is looking at, I suppose, simplification, looking at different styles of taxation—sales tax, VAT, ? taxes, ex [ph] taxes, several kinds of VATs.

All of these things are possibilities, and within any of them I suppose environmental taxes can be fit. And, you know, there are also—Chairman Greenspan suggested we needed a combination of taxes. So it is sort of open.

The big kahuna is off the table, but so are some little kahunas like charitable contributions, et cetera. So there are a large number of restrictions, and I guess the moral of the story is that this is only the first step in a very long journey. The report of that panel will be very important, but what comes out the far end of the policymaking process may be quite different and there is plenty of time to influence what that final result is going to be.

MR. : One brief follow-up to what Bill Frenzel has said. I think it's great in discussions like this—and I've been in forums like this before



where you're talking about the elimination of the deductibility of mortgage interest when people look so serious about it. And we're all thinking, oh, please, God, don't let them eliminate that deduction. With such aplomb we have this discussion, when, in fact, deep down we're all thinking, oh, my God, think how much more I'd pay in taxes.

MR. GALE: Let me add a comment on that. There are other options besides keep the deduction and eliminate it. To the extent that the deduction is meant to encourage home ownership—and that's a debatable proposition, since it was in the original income tax in 1913 which only applied to the top 1 percent of all households, a group among whom we don't think home ownership rates are a big issue.

But, anyway, to the extent that it's supposed to address home ownership, you could address that with a mortgage interest deduction for the first \$100,000 of mortgage debt. Any home ownership issue goes away at that point. Likewise, you could convert it to a credit because if you want to encourage home ownership, you should subsidize home ownership, not the incurrence of debt to have home ownership.

So you could convert to a credit that was a fixed credit for up to the first \$100,000 of value of the house. That would, by the way, divorce it entirely from the tax system, which is what Great Britain has done.

There's no reason that we have to subsidize home ownership, A, on the margin the way the mortgage interest deduction does, and, B, through the tax code.

So there are a range of options for dealing with public policy toward home ownership that extend far beyond keep the interest deduction or get rid of it. And I hope that as the tax reform proposal goes through the stages that Bill Frenzel mentioned that these issues come on the table.

All right, back to environmental issues.

Other questions?

Yes?

MR. : Hi. Eric Pica [ph] from Friends of the Earth. The question is Friends of the Earth a number of years ago, I think, seven or eight years ago, tried to do some comprehensive tax reforms at the state level and at the federal level. And what we ran into is we had this huge body of academic knowledge, but we didn't have the language to communicate what a tax shift was.

And, in fact, we did some focus group work and we found out that nobody cared about tax-shifting, nobody knew what green taxes were. The communication of this idea, which I think is an elegant idea, wasn't getting to the public, and I'm wondering if the participants up here have done with their organizations or affiliations any type of work that kinds of points the way to how to talk about green taxes, environmental tax-shifting, et cetera.

MR. GALE: Usually, about taxes and green, they're thinking about a different green. But do any of you want to comment on public strategy?

MR. : I would just say one thing. I think this is an easier thing to talk about after September 11th of 2001 because the public does understand the risks of being dependent not just the Middle East but other countries in the world that don't seem to bear much goodwill toward the United States.

And one argument you could make for taxing carbon or certainly at least gasoline, because imported petroleum is the source of that, is that this is going to help make us less dependent on parts of the world that we probably depend upon at some risk to the country. I think after that horrible event, I mean that's something that I think the public would understand, and that part of it at least would be a little bit easier to talk to them about.

MR. : I'd also say that that's a critical issue in terms of going forward not only in communication with the general public, but also in the communication with people on the Hill, as we were talking about earlier here. And so I think that's a critical next step for this type of work going forward.

But also to piggyback onto what you're saying, Paul, I think we may have more success in using language not just about the environment, but on other things, whether it's economic efficiency or leveling the playing field for industries or energy security, you know, things that the general public gets or that lawmakers understand that aren't necessarily

environmentally-related, but are kind of ancillary benefits of some of the ideas we've been talking about today.

MR. FRENZEL: I think Dr. Metcalf's paper showed us some interesting ideas about how to deal with the fairness question. I think it's out there, but it's hard to assemble.

MR. : On specific tax issues, I mean it really comes down to tax expenditures tapping outrage, anger. You know what I mean? Still, it has been more than a year since we did our first white paper on the SUV tax credit. Now, this may be a statement about the website, too. It still gets the most traffic of anything on our website, that SUV tax credit. People go there and look at that paper. It's amazing that it has had that much traction and it has captured that much imagination. And the key that we found over the years on issues like that is finding the nugget that gets you in the door to discuss with people and talking about the broader issues, talking about the bigger issues once they're already in the door and they're already interested.

MR. GALE: Let's take two more questions, one back here and then—okay.

MR. : I'm Nick Powers [ph] with the World Resources Institute, and I can't help but be tempted to disregard Paul Portney's advice and think about the political feasibility and receptivity at the same time that we're discussing ideas. And maybe that's because I'm already convinced it's a good idea.

But basically we know that there's going to be some significant political opposition to any carbon restraints through corporate interests and industry, and I was just curious if anyone could comment on kind of the counter-weight that whether there would be some corporate entities who see themselves as potential winners in a carbon-constrained world and would therefore be more willing to support carbon constraints in some form or another.

MR. GALE: Anybody?

MR. : Can I take a cut?

MR. : Well, we know that Duke Energy supports a carbon—

MR. : Right.

MR. : There are some firms, right, that would benefit from a carbon-restrained world even within certain industries—the Duke Energies amongst electric utilities, the GEs of the world who just recently announced that providing clean energy technology is going to be one of the major planks of their growth not only in the U.S., but in China and elsewhere going forward.

So I'm not saying that they would actually advocate actually doing this, but there are going to be winners. And I think what's interesting about one of the concepts that Professor Metcalf laid out was there is analysis out there that will show that there are some interesting alliances that are a potential.

For instance, in his model here you introduce a carbon levy to offset the elimination of double taxation of corporate dividends. You're going to have some winners. You're going to have those companies that pay a lot of dividends and aren't very energy-intensive—the big banks, insurance companies, et cetera—you know, his model shows that they actually end up winners in this game. So all of a sudden, you have potential allies, so to speak, of such a package that you may not naturally think of.

So, again, depending upon how it's designed, there are ways that certain industries can see that, net-net, they may end up on the positive end of things.

MR. GALE: Let me just add a comment on that that when the business community splits, one of two things happens. Either nothing gets through, as in the major tax reform efforts in the late '90s, or you get what someone mentioned last year with the ETI bill where there was a \$3 to \$5 billion hit on one industry, which obviously other industries were in favor of.

You know, industries that were not directly affected or firms that were not directly affected would support that hit on the affected firms. And the result there was they just broadened the umbrella large enough to bring everybody in. And, of course, they did that by making the bill so obscene that the whole business community would go for it. And so it may not be such a plus to note that there are some businesses or industries that are in favor of this.

Anyway, let's turn to the last question up front and then—

MR. : Thanks. Larry Wiseman [ph], American Forest Foundation.

Slightly off the topic, but the topic was introduced when someone mentioned the public's desire for clean air and clean water.

East of the Mississippi River, most of those environmental benefits are produced by individuals and families who own forest land. And I was wondering if anyone on the panel might comment on the prospects or the desirability of introducing tax policies that might enable these families to achieve the net cash flow that would enable them to stay on their land and not sell out to development. Right now, we're losing about 1.5 million acres a year of this forest land to development.

MR. : We need more revenue, not less. I mean, there are a lot of good things and we tend to encourage good things through the tax code. This is not the best time to be finding new good things to encourage by tax reductions, it seems to me. Though that may be a worthy thing, I hope we could find another way to do that. That's just my narrow perspective on this.

MR. GALE: That's a very broad perspective, actually.

So let me conclude by thanking the speakers and discussants for excellent presentations and thanking all of you for excellent questions.

[Applause.]

[Briefing concluded.]