

DR. MILES: MY NAME IS ED MILES. I RUN THE  
17 CLIMATE IMPACTS GROUP AT THE UNIVERSITY OF  
18 WASHINGTON.

19 VERY TROUBLING THOUGHTS BETWEEN SEVERAL  
20 PRESENTATIONS TODAY AND THE NEGOTIATIONS TO COME IN  
21 BALI. AND ROB BROUGHT THIS TO A CLOSURE IN MY MIND  
22 BY HIS REFERENCES TO WHEN THE WARNING LIGHTS GO ON,  
23 50 YEARS TO MAKE CHANGES.

24 MR. PALMER'S SUGGESTION IS THAT WE NEED  
25 GRADUAL CHANGES FOR THE INDUSTRY TO ACCEPT THIS AND

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1 TO BE SUPPORTIVE.

2 AND GO BACK TO RICHARD'S PRESENTATION THIS  
3 MORNING AND THAT ONE SLIDE WHERE HE LISTS  
4 ENVIRONMENTAL CHANGES ATTRIBUTABLE TO CLIMATE CHANGE  
5 THAT ARE COMING FASTER AND MORE POWERFULLY THAN WE  
6 HAD ANTICIPATED.

7 AND THEN ADMIRAL GAFFNEY'S PRESENTATION OF  
8 A DOCUMENT I THINK IS EXTRAORDINARILY WELL DONE,  
9 COMBINING BOTH EXPERIENCE AND DEEP WISDOM.

10 AND I'M VERY TROUBLED BECAUSE THERE'S A  
11 CONFLICT HERE BETWEEN THE TIME HORIZON WITHIN WHICH  
12 POLICY AGREEMENTS MIGHT BE POSSIBLE AND THE RATE AT  
13 WHICH NATURE IS CHANGING. AND IF YOU GOOGLE THE  
14 FOREIGN POLICY MAGAZINES FAILED STATE INDEX, YOU GET  
15 A MAP, AND YOU OVERLAY ON THAT MENTALLY THE RESULTS  
16 OF THE THIRD IPCC ASSESSMENT IN WORKING GROUP II AND  
17 THE FOURTH ONE. YOU FIND THAT THE DOWN SIDE OF THESE  
18 CHANGES FALL VERY HEAVILY ON THOSE LEAST ABLE TO BEAR  
19 THEM, TO COPE WITH THEM, TO MANAGE THEM. AND THEN  
20 YOU THINK ABOUT WHAT THE CONSEQUENCES OF THAT WORLD  
21 WILL BE.

22 AND ARE WE TALKING HERE ABOUT THE NEXT  
23 50 YEARS? ABOUT THE NEXT 10 TO 15 TO 20, AT MOST? I  
24 THINK THAT BEARS A CONSIDERABLE AMOUNT OF THINKING,  
25 AND IT MAKES 2 DEGREES C NOT SO ATTRACTIVE, IT MAKES

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1 3 DEGREES C CATASTROPHIC. AND EVEN FOR THE CHINESE,  
2 YOU KNOW, I'VE LOOKED IN SOME DETAIL AT THE  
3 VULNERABILITIES OF CHINESE AGRICULTURE AND WATER TO  
4 CHANGES IN CLIMATE, THEY'RE VERY SEVERE. AND IS THE  
5 CHINA OF TODAY AND ITS HEROIC PLANS ACTUALLY POSSIBLE  
6 IN THE NEXT FIVE DECADES? THAT'S A QUESTION TO  
7 PONDER.

8 AND I HAVEN'T SAID ANYTHING HERE ABOUT THE  
9 PUBLIC HEALTH PROBLEM FOR CHINA OF ITS OWN PATTERN OF  
10 DEVELOPMENT. THERE'S A LOT MORE IN HERE THAN JUST  
11 SOLVING THE ENERGY PROBLEM.

12 DR. SOLOW: I AGREE WITH MOST OF WHAT  
13 YOU'VE SAID, AND IT'S EXTREMELY ELOQUENTLY SAID.  
14 MAYBE WE SHOULD JUST LEAVE IT AT THAT. I MEAN, I  
15 DIDN'T HEAR A PLACE WHERE YOU WOULD WANT A COMMENT.

16 WE ARE LEARNING ABOUT THE HUMAN CONDITION,  
17 AND WE ARE LEARNING ABOUT IT VERY FAST. I MEAN  
18 50 YEARS AGO WE DID NOT THINK WE HAD A PROBLEM LIVING  
19 ON A FINITE EARTH. WE NOW UNDERSTAND THAT THAT IS  
20 THE UNDERLYING PROBLEM.

21           A LOT OF US ARE VERY EXUBERANT. WE WANT A  
22 LOT FROM LIFE. AND I DON'T THINK IT'S JUST POLICY; I  
23 THINK IT'S POLICY, IT'S BEHAVIOR, IT'S THE RATE AT  
24 WHICH YOU CAN INTRODUCE NEW TECHNICAL SOLUTIONS.  
25 THEY ARE ALL GOVERNING THE TIME DIMENSIONS. AND I

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1 DIDN'T TALK AT ALL -- THERE'S SOME WONDERFUL TALK  
2 THAT YOU COULD HAVE HAD ON THIS PROGRAM -- ABOUT HOW  
3 TO THINK ABOUT ADAPTATIONS SYSTEMATICALLY. I GUESS  
4 THERE WILL BE CONSIDERABLE DISCUSSION ABOUT THAT  
5 TOMORROW.

6           ROSINA BIERBAUM GIVES A WONDERFUL TALK, AND  
7 SHE TALKED ABOUT THIS VERY SERIOUSLY, THE DEAN AT THE  
8 MICHIGAN SCHOOL OF NATURAL RESOURCES.

9           ADAPTATION IS OBVIOUSLY ANOTHER PLACE YOU  
10 HAVE TO PUT INVESTMENTS, ESPECIALLY THE DEVELOPING  
11 WORLD. WHEN I TALKED TO A WORLD BANK GROUP, THAT'S  
12 WHAT THEY WANTED TO TALK ABOUT. THEY UNDERSTAND  
13 MONEY HAS TO FLOW TO THE DEVELOPING WORLD, TO THE  
14 POOREST PART OF THE DEVELOPING WORLD, WHICH ARE NOT  
15 GENERATING CARBON EMISSIONS AND ARE GOING TO BE  
16 DEALING WITH INADEQUATE RESOURCES WITH THE  
17 CONSEQUENCES. THAT IS A COMPLETELY ADDITIONAL AGENDA  
18 THAT HAS TO TAKE RESOURCES, CLEARLY. AND IT TAKES  
19 THE FORM OF PUBLIC HEALTH SYSTEMS, INFORMATION  
20 SYSTEMS, INSURANCE SYSTEMS, AND SO THAT HAS TO GO ON,  
21 AS WELL, CLEARLY. TO FIND THIS OPTIMUM IN THAT  
22 SPACE, THAT IS CERTAINLY PART OF THE ACTIVITY.

23           AND THEN WE HAVE THE DILEMMA OF  
24 GEOENGINEERING, WHICH IS ALSO GOING TO BE DISCUSSED  
25 ON FRIDAY MORNING. HOW MUCH OF THAT DO WE WANT TO

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1 ADMIT INTO THE OPTIMIZATION?

2           THE MORE SEVERE AND URGENT THE PROBLEM, THE  
3 MORE YOU'VE GOT TO REDUCE YOUR SQUEAMISHNESS ABOUT  
4 SOLUTIONS.

5           DR. SPINRAD: FINAL QUESTION.

6           DR. WEISS: I AM RAY WEISS, FROM SCRIPPS  
7 OCEANOGRAPHY.

8           I WOULD LIKE TO ASK, ROB, WHETHER YOU HAVE  
9 ANYTHING TO SAY ABOUT THE DEVELOPED WORLD EXPORTING  
10 ITS EMISSIONS TO THE DEVELOPING WORLD AND NOT HAVING  
11 AN ACCOUNTING UNDER PRESENT STRUCTURES BASED ON KYOTO  
12 FOR FOLLOWING THE CARBON WITH THE PRODUCTS AND THE  
13 EMISSIONS THAT ARE SO EXPORTED.

14           DR. SOLOW: THAT'S A SOFTBALL QUESTION.

15           DR. WEISS: I KNOW IT IS.

16           DR. SOLOW: THERE ARE A NUMBER OF  
17 INADEQUACIES OF THE CURRENT CARBON COUNTING, WHICH  
18 THAT IS CLEARLY ONE. WHEN WE IMPORT ALL THE -- WITH  
19 OUR BALANCE OF TRADE, THE PROBLEM IS BASED ON  
20 IMPORTING GOODS FROM CHINA THAT HAVE BEEN MADE WITH  
21 THE COAL THAT THE CHINESE ARE BUILDING THE COAL  
22 PLANTS TO BURN, AND WE AREN'T ACCOUNTING FOR THAT IN  
23 ANY SENSIBLE FASHION AT THE PRESENT TIME, AND IT  
24 CLEARLY HAS TO BE PART OF THE PICTURE.

25           THIS WHOLE SO-CALLED LEAKAGE QUESTION, NEW

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1 JERSEY ACCOUNTING, AND THEY'RE HAVING TROUBLE  
2 FIGURING OUT WHETHER THEY'RE NOT NOW IN THEIR COAL,  
3 INCLUDING THE CARBON EMISSIONS FROM THE PENNSYLVANIA  
4 COAL THAT IS COMING OVER THE BORDER AS ELECTRICITY,  
5 AND ONE ACCOUNTING ISSUE OF THAT KIND AFTER ANOTHER.  
6 THE ONE THAT I WOULD LIKE TO ISOLATE MORE  
7 THAN ANY OTHER IS THE MORE RADICAL DEPARTURE IN THE  
8 CARBON ACCOUNTING; AND THAT IS WE SHOULD BE DOING TWO  
9 COLUMNS FOR EACH COUNTRY FOR EACH YEAR OR FOR EACH  
10 STATE FOR EACH YEAR: ONE IS THE CARBON WE ACTUALLY  
11 CONSUMED, AND THE OTHER IS THE CARBON IMPLICIT IN THE  
12 INVESTMENTS IN CAPITAL STOCK. IF A POWER PLANT IS  
13 BUILT, COAL POWER PLANT IS BUILT, IT WILL EMIT,  
14 LET'S SAY, 6 MILLION TONS OF CO2 A YEAR FOR, LET'S  
15 SAY, 60 YEARS, IN WHICH CASE THIS IS A  
16 360-MILLION-TON-OF-CO2 COMMITMENT THAT IS IMPLICIT IN  
17 THIS YEAR'S BEHAVIOR. WE SHOULD BE DOING THAT KIND  
18 OF DOUBLE-COLUMN BOOKKEEPING, MUCH AS CAPITAL  
19 INVESTMENTS KEPT TRACK OF THEM IN THE LARGE CORPORATE  
20 WORLD. SO COMMITMENT ACCOUNTING SHOULD BE GOING  
21 SIDE-BY-SIDE WITH FLOW ACCOUNTING, STOCK, IF YOU  
22 LIKE, STOCK ACCOUNTING AND FLOW ACCOUNTING SHOULD BE  
23 GOING SIDE-BY-SIDE AS WELL AS FIXING ALL THESE FLOW  
24 ACCOUNT ISSUES.

25 ONE LAST THING: MELINDA IS WAVING THESE

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1 REPRINTS. DO IT ONE MORE TIME.  
2 I HAVE A PILE OF TWO REPRINTS, ONE ON  
3 CARBON CAPTURE STORAGE, ONE ON THE WEDGES, THAT ARE  
4 OUTSIDE AT THE REGISTRATION DESK. I WOULD LIKE TO  
5 SEE THEM ALL DISAPPEAR.  
6