

FOIA MARKER

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Collection/Record Group: Clinton Presidential Records
Subgroup/Office of Origin: Council of Economic Advisers
Series/Staff Member: Jeffrey Frankel
Subseries:

OA/ID Number: 13723
FolderID:

Folder Title:
GCC [Global Climate Change] Work Plan CEA 8/4 - 9/1/1997

Stack:	Row:	Section:	Shelf:	Position:
S	20	4	11	1

GCL

work plan

CEA

Jay
Randy

Joe

Keith

R.A.
in Rm
macro/pu fm. C i Jm.

work plan

8/4 -

9/1/97

PHOTOCOPY
PRESERVATION

CEA WORK-PROGRAM ON GCC

Jeff Frankel 9/1/97

WHO (and when)

Targets and timetables (TOP PRIORITY)

The importance of allowing time for capital turnover --

Case-study illustration:

Graph of replacement chronology of US power-generating plants
(make stylized assumptions on plant life if necessary).

of plants, and cost of replacement, against year.

> (CS+) KF

The economically-optimal path.

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In what year is peak of US emissions?

Of other Annex I?

In what year do they return to 1990 levels?

(1) Minimizing cost/benefit balance
(minus uncertainty or credibility problems).

=> no peak at all? Just slowed rise in emissions?

Need results from Integrated Assessment Models.

> (JS +) RL + JA

- Nordhaus, Manne-Richels?

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- Edmonds (SGM)?

JA

- Wigley? Other EMF models?

- Cline?

(2) Minimizing cost of a given level of stabilizing concentrations at 550 ppmv

- Manne-Richels (global peak in 2050; Annex I peak in 2020-30)

- Others (as above)?

- Any in-house models: SGM, Markal-Macro?

JA

(3) Compare costs and benefits of "1990 by 2010"
to "peak in 2015 and return to 1990 by 2040"

and to doing nothing ("business as usual").

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Costs are (I) price of carbon, gasoline, coal...

(ii) effects on income and consumption

(iii) likely volume of int. purchases of permits

Benefits are (I) emissions and concentration

(ii) implied effect on temperature in 2050 or 2100

(using simple linear interpolation from IPCC estimate)

- Any of the IA/EMF models

>(CS+QF)

- Any of the IAT models (DRI, MarkalM, SGM)

> Prelim. table DONE.

- Shackleton and G-cubed

- Other?

ALL THIS NEEDS MORE WORK > JA

Analogies with 1970s oil shocks

Is magnitude the same?

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That there would be no transfer to OPEC?

Any bogus reasons why the IAT models did not find such adverse effects?

Did they assume that the Fed could somehow offset supply shocks?

Technology and "free lunches"

- Critique 5-Labs Study > JA DRAFT DONE
Comments to EPA (coordinated with Gillingham)
- More general critique of the "technology" free lunch > RL + JA
Assumption that people ignore money-saving opportunities, that govt. Pgms. Help (e.g., can change discount rates and AEEIs), that common people are as capable as engineers, that people systematically over-consume energy but not other things, that they live in ideal homes, that energy-price uncertainty plays no role.... Double-counting pgms (in baseline and policy path).
- We're "technology optimists":
Historical relationship between prices and EEI > JF+CS+QF DONE
Replicate it and extend (e.g., lag structure; total energy spending) > JR DONE

Escape clause proposals

- What would be appropriate carbon prices for ceiling? > (JS+) RL
If 2015 emissions peak and
(e.g.) 1990 levels in 2040 (Relatively less aggressive)
If 1990 levels in 2010 (Relatively more aggressive)
- What do other agencies have in mind? > JF
(Victoria G, State Dept. Paper 8/15) CMTS. TO STATE DONE
- Global price cap and sales, rather than country-by-country?

Uncertainty

- To move timetable forward: Allow for a probability of climate disaster > JS
> MT
- and apply expected welfare,
- add risk-aversion
- Allow for imperfect political credibility of promises

Domestic Implementation

- Incidence of increase in energy prices >
- Has there been a "reluctance to trade" in SO2 pgm? > JF. Answer: no
- Should revenues be used to finance soc.sec.? >
Compute likely amount and path of revenue thru 2075 > CC + JA DONE
- (Tradeoff between stringency and flexibility > JS)
- Early Action Credit [ZC]

LDCs

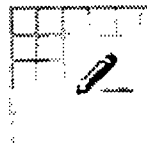
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= F(income, population, 1990 emission levels)? CMTS. TO STATE
Or as reduction of emissions growth rate? DONE -- JF
- What is threshold income level for blueprint proposal?
defined so as to include only State Dept.'s "Annex B" countries > DC DONE
- US competitiveness if LDCs don't participate* > PO+JF memo of 8/10
- Anyone care to take on a N-factor, N-good, N-country trade model?
N=2, or N=3 > JH (1st drafts DONE)

Inter-agency tasks

- Monitor incoming papers /reports (e.g. coming via State or NEC) >
- Coordinate with Treasury > RL

Tues, Wed, Fri



Francine P. Obermiller
08/20/97 06:13:37 PM

Record Type: Record

To: Jeffrey A. Frankel/CEA/EOP
cc: Lisa D. Branch/CEA/EOP
Subject: GCC TEAM

JOHN HAVEMAN
RANDY LUTTER
JAY SHOGREN
JOE ALDY
KEITH FUGLIE
ZACHARY CANDELARIO
DAN CHANG

ADELE MORRIS
MICHELE JOLIN
MIKE TOMAN *turn on EFF.org E103T*

IS THIS EVERYONE THAT YOU WANT INVITED?

*JEREMY RUDD
(1101) 1ARRAU*

Draft

close hold

GCC brief

1/1

JF Aug. 4, 1997

I. Targets and timetables

A. The economically optimal path for a given concentration target

1. The importance of allowing time for turnover of capital stock + for development of technology
2. Estimates from Manne and Richels: emissions peak in 2050; Nordhaus; others?
3. The role of uncertainty

a. Another reason to go slow: resolution of uncertainty

b. A reason to go faster: risk-aversion, particularly risk-continuity

4. The main argument for going faster: A plan to wait until 2050 is not politically credible. Firms will not begin to make the adjustments envisioned in the models until some serious policy measures are taken.

B. Alternative definitions of "stabilization"

1. Reducing emissions growth
2. Eliminating emissions growth
3. Returning emissions to levels from a past benchmark
 - a. The argument for 1990
4. Reducing emissions below 1990 levels
5. Concentrations

6. "Eliminate emissions growth by 2010-2020, and reduce below 1990 levels thereafter"

C. Intertemporal ("when") flexibility

1. Multi-year averages for targets
2. Multiple periods for targets
3. Banking
4. Borrowing
5. Proposals for a safety-valve on price
6. Proposals to make targets contingent on:
 - a. climate conditions or forecasts
 - b. growth of output or population
 - c. participation of LDCs

D. Negotiating with other countries for Kyoto

1. Their positions on targets, timetables and flexibility
2. What can we expect to get? How firmly do we hold to our line?

II. Domestic Implementation

A. The advantages of market-based solutions

B. Tradeable permits

1. Where is the permit requirement imposed?
 - a. Well-head and mine-mouth?

C. Targets & Timetables for Kyoto

1. The low

cost/benefit ratio of 1990 levels by 2010.

2. An alternative:

Xed Aug 11

- b. Power generators, buildings, and vehicles?
- 2. To whom are they allocated?
 - a. Grandfathering
 - (1) The illusion of neutral distribution
 - (2) Incidence
 - b. Advantages of auctioning over grandfathering
 - (1) The case for auctions (standard economist's argument; reduced bureaucracy; past successes: spectrum)
 - (2) Uses for revenue (whether auction or T)
 - (a) For deficit reduction/21st-century entitlement deficits
 - (b) For tax cuts
 - i) Pro-capital, e.g., corporate (reduces GDP costs, but regressive)
 - ii) ~~Income tax~~
 - iii) ~~Progressive~~ ~~e.g.~~ payroll tax (↘)
 - (c) For politically-facilitating redistribution
 - i) Adversely-affected firms (e.g., coal)
 - ii) Adversely-affected workers (e.g., coal)
 - iii) Other (e.g., key states)

C. T vs. auctioning

1. Politics of T?
2. Price vs. quantity, under uncertainty
3. Enforcement
4. Transactions costs
5. "Reluctance to trade" [What is SO2 record?]

D. Blend

1. Grandfather a fraction of permits
2. The argument for phasing out grandfather rights over time

E. How big would the effects be?

1. How high would the price have to go?
 - a. IAT results
 - b. Other results
2. What would be the ^{or require} cost?
 - a. In lost output?
 - b. In lost consumption?

4. Who would be most adversely affected?

3. The precedent of the 1970s oil shocks

F. Technology

1. What changes in technology and use could we expect?
 - a. truly autonomous ("business as usual")
 - (1) the shift from manufacturing to services
 - (2) other technical change
 - b. from price change
 - (1) conservation, and adoption of known technologies

record

- (2) ^{likely} effects on true technological change, ^{estimated} from the historical

- c. from government R&D and dissemination programs
- d. from announcement effect

2. The dangers of Wishful Thinking

- a. Do money-saving technologies exist, and why aren't they adopted

now?

- (1) ^{high} Discount rates and risk-aversion
- (2) The usefulness of government programs
- (3) The effect of price

G. Possible U.S. actions before a treaty is ratified

1. When should the nature of U.S. measures be decided/declared?

- a. Before Kyoto ?
- b. During ?
- c. After ?

2. What if there is no agreement in Kyoto?

- a. Next step in international negotiations

- (1) Suspend
- (2) Continue
- (3) Fundamental rethinking of framework

(a) Consider abandoning "no common measures"

(b) The other issues

i) Nordhaus proposal

ii) McKibbin-Wilcoxen proposal

- b. Possible US actions in the interim

- (1) Unilateral

(a) Same as proposed, or a milder version

i) Price measures

ii) Technology programs

(b) Cap and trade CO₂ for utilities

(c) ~~Ban energy subsidies~~

- (2) With a subset of other countries

3. The argument for deciding/declaring implementation before necessary

- a. Internal deliberations: it is good to face the implications before

making an international commitment

- b. Public dynamics: The information that the Administration was

considering serious [price-raising] measures would accelerate a controversial national debate; but

- (1) that debate has to take place eventually anyway

- (2) announcing the measures and having the debate early would

add credibility to U.S. stance, deflating pressure from both environmentalists and rest of world, thereby allowing US to hold to the more reasonable positions in Kyoto negotiations.

Domestic Extremities

policy
concerns

III. International Dimension

A. Allocation

B. International trading

1. Former Soviet Union

2. How big would international transfers be?

a. For other countries

b. For the US. (Does the US buy or sell permits?)

3. How much does trading among Annex I countries reduce the cost?

a. Worldwide

b. For U.S.

4. Technical details (trading by governments only?)

C. Monitoring and Enforcement

D. Participation of Developing Countries

1. What is efficient?

2. What is fair?

3. What is in the US interest?

4. Possible formulas to make "evolution" more concrete

5. JI

a. Defined with LDC targets/participation in tradable system

b. defined without LDC targets (e.g., agreement not to build a coal-fired

plant)

c. defined as subsidy for renewables technology

d. US policy toward N

E. Implications for US "Competitiveness" if LDCs ~~missing~~ *don't agree to limits*

1. Loss of foreign demand for US energy-intensive exports

2. Fall in demand for import-competing e-intensive goods

3. Decrease in US oil imports and in world price of oil

4. Other offsets (expansion of non-e-intensive manuf.s?)

F. Implications for the US Trade Deficit

1. Trade balance vs. current account balance

a. likely to move in opposite directions (transfer problem)

2. Likely size and magnitude of international capital flows

CEA WORK-PROGRAM ON GCC

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> RL

Jeff
22



Joseph E. Aldy
08/29/97 07:04:44 PM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: weekly report

Michele,

Ok, so I have been somewhat slack in generating my weekly report. My apologies -- enjoy this first one.

Joe

The week(s) in review:

Saving the planet cost-effectively (GCC)

Targets and Timetables

I have been working with Jeff and the modelers on the T&T paper. We have new model runs with SGM (Jae Edmonds et al at Battelle), MERGE (Rich Richels at EPRI) and Markal Macro (Phil Tseng at DOE). I have organized the key assumptions and important outputs from these model runs into a lotus spreadsheet. Jeff has a version of this spreadsheet, although with new runs coming in today, an updated version of the spreadsheet should be ready by Tuesday.

5 Labs Study

The lead authors of the 5 Labs Study (Levine from Berkeley Lab and Brown from Oak Ridge) gave a presentation on the study a week and a half ago. In response, I drafted a point-by-point critique and included some of our in-house memo critiquing the study and sent that to Joe Romm and Eric Petersen at DOE, Gillingham at Treasury, TJ and Bob Tuccillo at OMB. The labs expect to draft a response to our criticisms "soon", although new versions of the executive summary and chapter 1 of the report, that came in today, do not, on a first glance, appear to conform to our suggestions.

International transfers associated with international permit trading

I drafted a memo for Jeff that described the cash transfers of international permit trading based on the latest SGM modeling runs. Interestingly, SGM projects that the US is always a permit buyer in the 1990 in 2010, peak in 2015, and -10% of 1990 in 2010 scenarios. This does not replicate the results from the G-Cubed modeling efforts by EPA that demonstrate that sometimes the US is a buyer and sometimes we are a seller of permits. I am going to rework the memo by incorporating other results from the literature and discussing some of the key modeling assumptions that drive the divergence in projections (e.g., assumptions about other countries' growth paths, MC of abatement, etc.).

Saving Florida from going under water, twice

I worked with Chris Carroll on a memo about funding the social security fund's shortfall in the next

century with carbon permit auction revenues. Chris should have this memo wrapped up by Tuesday. The bottom line -- don't do it -- the revenues don't match up well, and Chris also wrote several public finance reasons against such a tie-in.

Drafted Answers to Committee Questions for the Record

I wrapped up the House Commerce follow-up question regarding the Argonne Lab Workshop.

Regarding the Senate EPW questions, I have drafted answers, but Jay and I aren't sure what to do with them -- at first, he didn't like them (he thought they were too specific), but when he took a stab at answers, he didn't like those either (he thought his were too vague). Perhaps we should talk about our strategy in answering them. This conversation may be useful, especially if we have to tackle many of the questions in the latest submission from House Commerce.

Meetings

I went to a lot of them.

Stuff that's not related to saving the planet cost-effectively

Sustainable Development Indicators Group

As I mentioned in a staff meeting several weeks ago, this interagency working group wants to be jointly chartered by CEA. Jay and I met with two members of the group's secretariat (Dave Berry and Ted Heintz) about this issue, and Jay forwarded on a memo we wrote about the issue to Janet. While I think the guys running this show are nice, I also believe it is a screaming boondoggle for CEA. I mentioned at this week's SDI meeting that Jay sent Janet a memo on this issue, but that no decision has been made, since she has been out of town. Dave Berry told me that he is meeting with Katie McGinty in a couple of weeks to talk about the charter issue, and he expected to raise the issue with her (apparently, the group has not yet asked CEQ if they were interested in this joint charter idea). Did I mention that this is an awful idea for CEA?

The group intends to send the report out for agency review in a couple of weeks. Presumably, they will want CEA to review it, and they may offer to do a presentation for CEA.

Next Week:

GCC -- is there anything else?

I will continue to work with the modelers on the T&T paper.

I will work with Gillingham on a joint CEA-Treasury "Technology" paper.

I will update the international transfers memo.

After meeting with you and/or Janet, I will work on the Sen EPW questions, and possibly the House Commerce questions.

I will brief Randy on what fun he has missed over the past two weeks (and Adele if she starts next week).

I will set up the new schedule for WEB fact-checking (Tom passed the torch on to me).



Daniel K. Chang
08/29/97 05:43:08 PM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Weekly Report

This week:

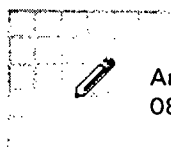
Climate change (data acquisition/presentation, fact-checking, meetings), WEB duties (charts), RA duties (lit searches)

Next week:

Same

Need to see Janet:

none



Amy N. Finkelstein
08/29/97 06:13:19 PM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Re: REMINDER -- Weekly Reports

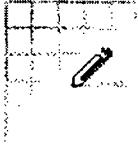
Michele --

This week I spent mostly getting together statistics and reading the literature on child care for the kids ERP chapter and on employment/unemployment race differentials for the race chapter. The child care information is essentially complete; the race literature is taking longer. I also wrote a web article for next week's issue on child care.

I spoke with Jonathan Weiss at the Community Empowerment Board and he gave me a lot to read about empowerment zones, particularly the design and effectiveness of tax incentives, so I've been trying to get up to speed on that.

Next week I'm going to continue the race reading. Maria also asked me to look into the advantages/disadvantages of targeting child care subsidies to poor places (rather than poor families) because the community development subgroup of the race initiative is looking for ideas to improve communities (without spending any more money).

--Amy



Keith O. Fuglie
08/29/97 08:09:01 PM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Re: REMINDER -- ERP Chapters

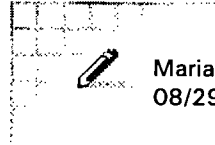
Activities this week:

- (i) climate change: assessed accelerated depletion of electric utility plants
- (ii) WEB article on agricultural productivity and research (draft completed)
- (iii) sugar: further analysis of economic and legal implications of implementing an auction for import quota.

Activities next week:

- (i) Further work on sugar
- (ii) Further work on examining economic consequences of reforming tobacco production policy.
- (iii) Assess implications of Senate bill to increase funding for agricultural research.

I don't anticipate requiring Janet's time next week.



Maria J. Hanratty
08/29/97 12:17:47 PM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Re: REMINDER -- Weekly Reports

meetings this week:

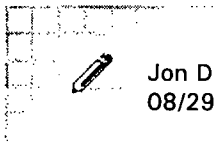
1) welfare to work meeting, august 26

worked on:

- 1) LRM on protecting privacy of health care information
- 2) background information on Washington Post article on New York demonstration program which changes the way that graduate medical education is financed through the Medicare program.
- 3) helped Chris Carroll with an LRM on empowerment communities
- 4) work on the child chapter of the erp: accumulated a lot of background information on indicators on child well-being, and began to digest this information.
- 5) draft of WEB piece on housing.

next week:

- 1) we have been asked to draft a list of suggestions for the community development group, within the race initiative.
- 2) meetings on child care (wednesday)
- 3) welfare to work



Jon D. Haveman
08/29/97 11:30:33 AM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Weekly Reports

Activities for the week: 8/25-8/29/97

1. Getting acquainted

A great deal of my time has been spent acquainting myself with the many different dimensions of this position. This includes attending meetings on:

- a) the Multilateral Agreement on Investment
- b) Super 301 and the Smith & Wesson 301 petition

as well as reading chapters for the APEC Economic Outlook and providing the authors with some feedback.

2. GCC

My involvement with the GCC has been to develop simple theoretical results regarding the impact of non-Annex 1 participation in emission reductions on the welfare of the United States and other Annex 1 countries. As a secondary exercise, I have been generating data regarding the net export position of the US (and aggregate Annex 1) emission intensive industries vis a vis non-Annex 1 countries.

3. ERP

I have been working on an expanded outline for the international chapter of the ERP. This effort should begin generating text in the near future.

To: Michele Jolin
From: Sanders Korenman
Regarding: Activity report
Date: August 29, 1997

I spent most of this week collecting articles and data for the race chapter of ERP, and drafting a section on race differences in business ownership/self-employment.

I attended a welfare strategy meeting on 8/26. There is likely to be a bill introduced soon regarding the status workfare workers. The meeting raised issues about the treatment of workfare workers for purposes of unemployment compensation. I wrote a related memo this week to Jeff in response to a question of his regarding welfare block grants and recessions. In that memo I suggested that reform of Unemployment Insurance to include more workers with relatively low attachment to the labor force might be preferable to, or needed to supplement increased rainy day welfare funds for states with high unemployment. I spent some time this week trying to understand the relationship between workfare and UI. As a result, I plan to write a memo next week on UI reform, which will include a discussion of interactions between the UI program and welfare reform.

I am also working on a WEB piece about rise in labor force participation of women who maintain families since the passing of welfare reform legislation in August 1996.

I help Amy Finkelstein write a WEB piece on the implications of welfare reform for the child care market.

Next week: meetings on child care policy; welfare reform.



Ha Yan Lee

08/29/97 01:43:49 PM



Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Weekly Report

Hi, Michele,

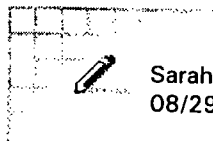
My week:

- Staff meeting
- Weekly 36 charts.
- Friday Market Memo assistance
- Trained Amy how to write and wrote State & Metro unemployemnt Memo
- Wrote Initial Unemployment Claims Memo
- Worked on MSR tables for Steve
- Worked on consumption of durables RATS program for Chris
- Some charts and regressions for Chris' stock market web piece
- Library research for Chris
- Did some Econometrics review for RATS programs (Steve)
- Some internet research for Chris

Next Week:

- Staff meeting
- Weekly 36 charts update
- Initial Unemployment Claims Memo
- Friday market Memo assistance
- Work on Housing project with Steve
- Work on Stock price project with Chris
- More studies on RATS program and metrics

Janet's Time: None necessary



Sarah J. Reber
08/29/97 05:55:54 PM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Weekly Report

This week I have been collecting background material for ERP chapters, trying to sort out the health provisions of the budget bill, and some WEB preparation.

Next week will be basically the same.

There are a couple of environmental issues on the radar screen that we may or may not want to be involved with: 1) EPA Mercury report (CEA had some problems with this about 1-1/2 years ago. I am trying to figure out what they were and whether they have been resolved. I will talk to Randy, etc. and report back on this.) 2) the Clean Air Act retrospective cost-benefit analysis (we have mentioned this to Janet, but we need to decide whether we want to take action).

I don't have any official business to bring up with Janet, but I would like to meet with her about graduate school for a few minutes at some point over the next couple weeks, if we can fit it in.

Sarah

From: Jeremy B. Rudd on 09/01/97 04:22:48 PM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Re: I need a weekly report from you 

Items worked on last week:

- EDRC preparation: in particular, I have been trying to pull together U.S.G. comments on the EDRC draft
- Preparation for meeting Jeff had with the new head of the OECD economics section (Ignazio Visco)
- Energy efficiency regressions for Jeff (climate change stuff), term spread memo. for Jeff (very minor item)
- NAPM memo, domestic markets memo, GDP memo, advance durable goods memo (releases for President)
- GDP press statement

(*) - Financial services reform legislation: This is the only thing that might possibly require Janet's attention; I will discuss it with her at the IO cluster meeting and/or after a Thursday meeting at Treasury w/Richard Carnell that I am attending.

- Stock market stuff for WEB piece (w/Ha Yan and Chris Carroll)

Next week:

- EDRC-related stuff (there is a delegation planning meeting on Wednesday w/Michael Prell of the Fed. and Joe Gagnon of Treasury that Steve and I are running)--the meeting in Paris is in a week; Steve and I leave in the afternoon on September 9th.
- Speeches for Janet
- The Treasury meeting mentioned above (important)

Zachary M. Candelario

09/02/97 08:20:00 AM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Re: I need a weekly report from you 

Sorry about that,

Last week I worked on the following projects:

1. International work with Jon, for a memo to Jeff-Topic: Climate change, international trade aspects.
2. Research work with Aaron Edland, regarding issues of regulation for response to OMB report.
3. Library research for Sandy.
4. Wrote another Domestic roundup for coming week, Topic: CEO turnover in America's corporations.
5. Climate change work for Joe.
6. Worked on Concentration in Industry project for Chad for VP.
7. Made Charts for Keith and worked on Fact checking his work on Coal Plants.

Meetings I attended:

One climate change meeting.

Attended a meeting with Jeff at NEC regarding Climate change Early Action Credit Program.

This week I plan to:

1. Continue work with Aaron, as well as research potential ERP material for him.
2. Attend Ag/Envir cluster meeting.
3. Continue Concentration in Industry project.
4. Work on Web.

● Steven N. Braun

09/02/97 09:08:37 AM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Steve's work: retrospect and prospect

Last week:

- Read much of the OECD's draft survey of the US in preparation for Sept 9-11 mission to OECD. Much more work remains.
- worked on demographics of housing issues
- Statistical Release Memos: Advance durables (with Jeremy) , GDP Q2 (revised), purchasing managers (with Jeremy).
- Press releases: wrote (with Jeremy, Michele & Jeff) GDP press release

Next Week (Sept 2-5)

- Macro Update for Web
- Statistical Release Memos: labor market report for August
- Mid-Session Review release: (date not firmly set, but 70% chance of release this week; most likely this Friday). No decision has been made on how this will be staged (Presidential involvement is a possibility)
- Much more work remains on the mission to the OECD.

Need Janet's time for

- Mid-Session Review rollout (timing unknown)
- Labor market release (thurs eve.)

Joint Treasury/CEA Climate Change Agenda
August 29, 1997

I. Domestic Emissions Trading

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or beginning
- B. Strategy: Let EPA move first. They are supposed to deliver to us their version of the two upstream options today, and the two downstream options late next week. T 23w 24511

C. Tasks (SQUITIERI):

1. Assess the upstream writeups from EPA, relative to our write-up; incorporate anything we want to from theirs into ours, and ship ours back to them as our "comments" on their draft. *(Target ship-back date is Thursday, Sept 4)*
2. Develop a clear, strong, and frank statement of why we oppose tradable credits. Key points should include the difficulty of defining "exchange rates" between sectors; the inefficiencies of CAFE-like approaches (doesn't penalize intensity of use, impacts only market for new units, not existing); should draw on empirical literature concerning the cost of the CAFE standards relative to a gasoline tax. *(Should be essentially complete by the time we receive their draft of downstream options; upon receiving such draft, modify as necessary; transmit to EPA)* 9/21
3. Comment on downstream writeups. Also, append statement to the effect that "these options are vigorously opposed by the economics agencies" *(By Monday, Sept 8)*
4. Discussion of auction mechanism with Kwerel and/or other auction experts as soon as possible.

II. Technology

- A. GILLINGHAM and FRANKEL to peruse DoE's response to our comments, and give signoff (or not) to 5 labs study *(Response expected WHEN?)*
- B. GILLINGHAM (and CEA collaborator?) to work on broader technology paper. *(Rough draft prepared by COB Tuesday, Sept 2?)* 12.01:
Joe ? 9/5
Rough
draft
Request

Transmit to D. WILLIAMS and B. BOORSTIN for their comments

- C. GILLINGHAM to check in with TJ Glauthier to see what he envisions for technology options paper - make sure that it reflects our concerns, as laid out in our broader paper.

III. Targets and Timetables

- A. FRANKEL, SHOGREN, SQUITIERI, and ROBERTS to work with modellers to get runs of different paths of emissions, producing data on concentrations, temperatures, and costs to the economy. Then write up as memo. CEA to lead. (Rough draft by WHEN?) Bing
- B. JONES to write up a summary of the Nordhaus argument that 1990 by 2010 is worse than nothing. (Rough draft by WHEN?)

IV. Other Analytics

- A. MULDOON to work on effects of policies on the typical family. (Draft by WHEN?)
- B. SANTEBASAN ^{FUCHIE} to work on age distribution of plants, coal and nuclear (mostly done, incorporated in Frankel T&T memo). (Draft by WHEN?) done
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- D. ROBERTS to work on memo on size of financial flows. (Draft by WHEN?) done
- E. MULDOON to work on political economy lessons from BTU tax and Carter oil allocation scheme. (Draft by WHEN?)
- ~~HABEMAN comparative advantage~~

- F. SCHOLZ to work on revenue recycling. How does the prescription of academic public finance theory translate into the real world? Why do simulations of empirical models suggest that deficit reduction might be a better way to go than recycling?
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- H. GRUBER and GILLINGHAM to work on developing principals for climate change.
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- B. Paper by USTR on Domestic Implementation and Trade - ROBERTS and WILCOX to provide comments by 8/29.
- C. Paper by Justice on relationship between international and domestic trading - WILCOX to provide comments by 8/29. (*Jim Rubin; 514-9050*)
- D. Paper on escape clause - GRUBER comments passed on to Victoria Greenfield. FRANKEL working on analytics of when we would need escape clause - WILCOX and others should consult with him on this - this could be a big issue. *(Would a Bill-Poole-style analysis be helpful here? It would seem to be important to take into account what is the relative importance of various sources of uncertainty — e.g., as between technology versus growth)*) bny tape
- E. Paper on competitiveness - WILCOX to check on status and provide comments by 8/29 (*Orszag is author; both he and Sandalow are out; best guess is that paper has not been revised since we last commented.*) bny
Hartman - comparative adv
- F. Pomerance and Hunker have been tasked to produce a paper on negotiating implications of different targets and timetables by 8/22 (*Hunker denies that he and Pomerance were so tasked; he is checking around to see what he can find out about this.*)
- G. Federal Undertakings paper due 8/29 - WILCOX and/or GRUBER to provide comments week of 9/1
- H. Paper on early credit - GILLINGHAM and GRUBER to check with Sandalow as to where this lies?
- I. Paper on transition assistance - GRUBER to check with Ed Montgomery (DoL) on status and provide comments. (*A useful analogy might be provided by the Freedom to Farm Act.*)

VI. The big picture

- A. How and when will developing countries participate?
- B. Targets and timetables - FRANKEL
- C. International enforcement
- D. What if Kyoto blows up?

Domestic implementation / unilateral action.

VII. Briefing for Rubin - GILLINGHAM

Joint Treasury/CEA Climate Change Agenda
August 29, 1997

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- B. JONES to write up a summary of the Nordhaus argument that 1990 by 2010 is worse than nothing. *(Draft has been reviewed by Wilcox; revised version will be circulated more widely Sept 2)*

IV. Other Analytics

- A. MULDOON to work on effects of policies on the typical family. *(Still in early stages of preparation; rough draft by Friday, Sept 5)*
- B. SANTEBASAN to work on age distribution of plants, coal and nuclear (mostly done, incorporated in Frankel T&T memo). *(Draft by WHEN?)*
- C. GRUBER and JONES to work on incidence *(Rough draft by Sept 2)*
- D. ROBERTS to work on memo on size of financial flows. *(Rough draft exists; final to Summers by Fri Sept 5)*
- E. MULDOON to work on political economy lessons from BTU tax and Carter oil allocation scheme. *(Rough draft exists; final by Weds Sept 3)*

- F. SCHOLZ to work on revenue recycling. How does the prescription of academic public finance theory translate into the real world? Why do simulations of empirical models suggest that deficit reduction might be a better way to go than recycling? (Do they?)
- G. GILLINGHAM to work on spelling out emissions baselines for developing countries that would not involve either excessive restraint on growth nor large transfers of resources.
- H. GRUBER and GILLINGHAM to work on developing principals for climate change.
- I. GRUBER or GILLINGHAM to write up a pithy response to 5labs: Even if you accept the report lock, stock and barrel, you get only X percent of the way there without raising price. To get all the way there, you have to raise price by Y percent. This would have the following implications for energy prices — x for coal, y for gasoline, etc. — and would be roughly Z times as large as the BTU tax that was proposed early in the first term.
- J. GRUBER, WILLIAMS, and BOORSTIN to work on the political economy of climate change.

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Joint Treasury/CEA Climate Change Agenda
August 29, 1997

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- A. EPA now is now set on presenting four options, representing the convolution of upstream/downstream and auction/allocation. HAVE YOU PUT IN A "T" POLICY, AMONG A LIST OF POSSIBLE OPOLICIES IN THE INTRODUCTION, (EVEN IF THE REST OF THE PAPER ISN'T ABOUT THAT)? IT COULD BE IN THE CONTEXT OF "THIS IS WHAT MOST OF THE 2300 ECONOMISTS WHO SIGNED THE LETTER HAD IN MIND WHEN THEY SAID THIS COULD BE DONE EFFICIENTLY."
- B. Strategy: Let EPA move first. They are supposed to deliver to us their version of the two upstream options today, and the two downstream options late next week.
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- [GOOD]
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JOE ALDY WILL BE OUR GUY HERE. (ALSO j.RUDD HAS RE-DONE THE REGRESSION RESULTS OF SANTESTEBAN-FRANCO)

Transmit to D. WILLIAMS and B. BOORSTIN for their comments

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SHOGREN HAS LEFT NOW. IT'S ALDY HERE TOO NOW. WE HAVE A DRAFT.
- B. JONES to write up a summary of the Nordhaus argument that 1990 by 2010 is worse than nothing. *(Rough draft by WHEN?)*

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 - C. GRUBER and JONES to work on incidence (JONES is doing memo for early next week - should pass to WILCOX for review). *(Draft by WHEN?)*
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IT'S DONE (ALDY)
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- *****
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HERE AND ON V.A BELOW , DO YOU HAVE MY CMTS. ON STATE DEPT. PAPERS?
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OUR NEW TRADE GUY, JON HAVEMAN, IS WRITING ADDITIONAL ON THIS SUBJECT

- F. Pomerance and Hunker have been tasked to produce a paper on negotiating implications of different targets and timetables by 8/22 (*Hunker denies that he and Pomerance were so tasked; he is checking around to see what he can find out about this.*)
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DOESN'T DOMESTIC IMPLEMENTATION (/UNILATERAL ACTION) BELONG ON THIS LIST?

VII. Briefing for Rubin - GILLINGHAM

CEA WORK-PROGRAM ON GCC

Jeff Frankel 8/20/97

WHO (and when)

Targets and timetables (TOP PRIORITY)

The importance of allowing time for capital turnover --

Case-study illustration:

Graph of replacement chronology of US power-generating plants
(make stylized assumptions on plant life if necessary).

of plants, and cost of replacement, against year.

> CS+KF

The economically-optimal path.

. JA

In what year is peak of US emissions?

Of other Annex I?

In what year do they return to 1990 levels?

(1) Minimizing cost/benefit balance

(minus uncertainty or credibility problems).

=> no peak at all? Just slowed rise in emissions?

Need results from Integrated Assessment Models.

> JS + RL

- Nordhaus, Manne-Richels?

- Edmonds (SGM)?

- Wigley? Other EMF models?

- Cline?

(2) Minimizing cost of a given level of stabilizing concentrations at 550 ppmv

- Manne-Richels (global peak in 2050; Annex I peak in __?)

- Others (as above)?

- Any in-house models: SGM, Markal-Macro?

(3) Compare costs and benefits of "1990 by 2010"

to "peak in 2015 and return to 1990 by 2040"

and to doing nothing ("business as usual").

> JS + RL + CS

Costs are (i) price of carbon, gasoline, coal...

(ii) effects on income and consumption

(iii) likely volume of int. purchases of permits

Benefits are (i) emissions and concentration

(ii) implied effect on temperature in 2050 or 2100

(using simple linear interpolation from IPCC estimate)

- Any of the IA/EMF models : Richels

> CS+QF

- Any of the IAT models (DRI, MarkalM, SGM)

> Prelim. table DONE.

- Shackleton and G-cubed

- Other?

Analogies with 1970s oil shocks

Is magnitude the same?

> JA + RL

DONE

How much difference does it make that this would be pre-announced? (+CS)

" That there would be no transfer to OPEC?

Any bogus reasons why the IAT models did not find such adverse effects?

Did they assume that the Fed could somehow offset supply shocks?

Technology and "free lunches"

- Critique 5-Labs Study > JA DRAFT DONE
Comments to EPA (coordinated with Gillingham)
- More general critique of the "technology" free lunch > RL + JA
Assumption that people ignore money-saving opportunities, that govt. Pgms. Help (e.g., can change discount rates and AEEIs), that common people are as capable as engineers, that people systematically over-consume energy but not other things, that they live in ideal homes, that energy-price uncertainty plays no role.... Double-counting pgms (in baseline and policy path).
- We're "technology optimists":
Historical relationship between prices and EEI > JF+CS+QF DONE
Replicate it and extend (e.g., lag structure; total energy spending) > JR

Analyze escape clause proposals

- What would be appropriate carbon prices for ceiling? > JS+RL
If 2015 emissions peak and
(e.g.) 1990 levels in 2040 (Relatively less aggressive)
If 1990 levels in 2010 (Relatively more aggressive)
- What do other agencies have in mind? > RL+JF
(Victoria G, State Dept. Paper 8/15)
- Global price cap and sales, rather than country-by-country?

Uncertainty

- To move timetable forward: Allow for a probability of climate disaster > JS
> MT
- and apply expected welfare,
 - add risk-aversion
 - Allow for imperfect political credibility of promises

Domestic Implementation

- Incidence of increase in energy prices >
- Has there been a "reluctance to trade" in SO2 pgm? > JF. Answer: no
- Should revenues be used to finance soc.sec.? >
Compute likely amount and path of revenue thru 2075 > CC + JA
- Tradeoff between stringency and flexibility > JS

LDCs

Need proposed formulas for LDC participation > RL + JF

- What is threshold income level for blueprint proposal?
defined so as to include only State Dept.'s "Annex B" countries
- What is a reasonable emissions path formula for future LDC participation?
= F(income, population, 1990 emission levels)?
Or as reduction of emissions growth rate?

US competitiveness if LDCs don't participate > PO+JF memo of 8/10

- Anyone care to take on a N-factor, N-good, N-country trade model?
N=2, or N=3 > JH

Other

Monitor incoming papers /reports from negotiations (coming via State) >



toman @ rff.org
08/19/97 05:54:00 PM

12

Record Type: Record

To: Jeffrey A. Frankel

cc:

Subject: GCC workplan

August 19, 1997

MEMORANDUM FOR: JEFF FRANKEL
JAY SHOGREN
RANDY LUTTER

FROM: MIKE TOMAN

SUBJECT: CEA GCC WORK PROGRAM

As promised in my earlier memo, I would like to offer a few thoughts about the work plan as it was described to me last Friday. Let me start by saying something about my own particular biases concerning how the climate change policy issue is defined and how it can be addressed, in particular by economists. I start with the premise that economics can contribute a lot to an understanding of the issue and hence it is crucial and gratifying that CEA is so involved but that the resolution of the issue will be even more a political issue than most in the area of environmental economics. This in turn leads me to the approach to regulatory assessment laid out in the revised OMB guidelines. Those guidelines say that when knowledge of benefits, or costs, or both, is seriously incomplete and/or uncertain, the best the analyst can do is lay out what is known perhaps in some scenario analyses to inform the political decision process.

You all are much closer to the politics of this issue than I am these days, both from the standpoint of the Administration and generally. It is certainly true that Congress is unlikely (to put it mildly) to ratify any treaty that appears to impose significant costs for limited gain, or to put the US in too much of an inferior position relative to other countries. On the other hand, there is so much momentum for a medium-term stabilization goal within the environmentalist wing of the Administration and internationally that arguments to the contrary will be difficult to make in the short amount of time before Kyoto, no matter how sound they seem to us as economists.

What does all this have to do with the work plan? It seems to me that of all the tasks on the list, the most important by far is the compare stabilization at 1990 by 2010 with peak in 2015 and decline

thereafter job, coupled with the question of escape clauses. I think it is useful to summarize what is known from the IA literature, and from the cost-of-long-term-concentrations literature. I would think that these jobs would not be too hard, given the EMF14 study of IA models and the growing literature on long-term concentration targets. But as was noted in the discussion last Friday, enviros will remain skeptical about whether the IA literature really addresses the risks and intergenerational equity issues, and political types will (with some justification) question the utility of a policy target over 5 decades in the future.

On the other hand, the discussion about returning to 1990 levels by 2015 versus accommodating growth until 2015 and then doing more afterwards to pursue a long-term target can shed real light on the costs and benefits of options that have more potential within the current policy debate. If the opportunity for getting a hearing for economic arguments at this late date is limited, then that is where I would put a lot of my attention. My understanding is that Edmonds is doing some analysis of these options for you; and I would presume that Richels would likewise help out, if he hasn't already. As Jeff pointed out Friday, what one would like is to show that the cost savings from the moderately more delayed path are significant, and that catching up on the GHG reductions is not that hard to imagine given the right policy signals. It would also be crucial to show how the potential cost savings from the delayed abatement path depend on technical progress, with implications for the need to continue R&D on carbon-saving technologies.

The Achilles tendon on all these delay arguments, as you know, is the dynamic inconsistency problem. It seems to me that if one takes the OMB-like approach of laying out all the costs and benefits, and the uncertainties, one needs to acknowledge that there is some probability that some promised reductions in future GHG emissions will not be realized. One needs to go further to attack a very hard problem, namely is there some way to reduce the time-inconsistency? For example, could a deal be struck with utilities (major beneficiaries of the delay strategy) to give them intertemporal flexibility but put some of the fruits in escrow (e.g., delay in stranded cost relief)? Could they be bonded in some other fashion? Could interim reductions in the rate of growth, and inducements for early emissions reductions through bankable credits, help build confidence? A basic part of my argument is that in dealing with this issue, one cannot entirely separate the target/timetable debate from the implementation debate.

Another importune aspect of the issue is showing that the consequences of delay are manageable given some longer-term concentration goal. For example, if I understand Manne/Richels right, GLOBAL emissions must peak in 2050 to hit 550 ppm (actually more in GHG-equivalents when other gases are taken into account), not just US emissions. What can analysis say about how delay in the downturn of US emissions might affect achievement of the global stabilization? (Some analysis of different emissions trajectories by OSTP speaks to this.) Would the delay in the global stabilization be minor, thus having little effect

on long-term concentration, or would it be bigger?

That leads in turn to the escape clause issue. I think this is important and unappreciated, and I think it is great that it is on your agenda. Do you have any ideas yet? One simpleminded answer is that one would eschew QELROs entirely and implement a carbon tax (the Weitzman argument), but realistically I doubt that would go anywhere.

(On the other hand, if the President REALLY wants to lead on this issue, why not challenge the Europeans and Japanese to join the US in imposing a moderate carbon tax within 2-4 years, to see what happens?

Ours of course could be packaged with revenue-neutral recycling.) I think it is also important to think of escape clauses that apply if, as a cynic would suspect, other Annex 1 countries are more talk than action on their GHG limits. Somehow our willingness to be bound by a legal limit needs to be explicitly tied to other countries' performance to strengthen incentives against shirking over time.

As far as the technology/free lunches item goes, I certainly agree with the need to continue laboring away on the counter-message (and David Wilcox at Treasury has put together some important recent literature that will help). Here again, though, I am not sure what the short-term payoff will be given the theological nature of this debate. Perhaps the best that can be hoped for (and this is no small thing) is to point out how sensitive the cost estimates are to assumptions about technical progress (in any economic modeling platform, not just the IAT ones), and that there is considerable controversy about how much induced technical change will be delivered. Just as important, as was noted Friday, it would be extremely useful to get behind the basic notion that technical advance is crucial to long-term management of the global warming risk, BUT that progress will not happen magically. This would dovetail with OSTPA's agenda for continued research support of promising technologies, while emphasizing the need for concrete policies to induce changes in innovation and technology diffusion behavior. (I actually think that there will be no real solution to this policy problem unless technology progress makes it less of a hair-shirt proposition, or unless we really do discover a catastrophe waiting in the wings.)

One lower-level item on the agenda is how to deal with the possibility of a climate disaster. I am not sure how much literature you have assembled on this issue, but I have just discovered that there is a considerable amount. If you do not already have this, and you want to pursue this point further, I would be happy to try to pull the relevant papers together.

One last general point having to do with analytical strategy. I know from experience that there is usually not time to do pretty-bow work, and that various shortcuts (extrapolations, stylized assumptions, etc.) have to be used. For better or worse, however, much of the climate debate is dominated by fairly complex energy/economic models and people with a great deal of experience using these models. This is in part because there is a legitimate danger that more ad hoc approaches will be misspecified. Even if this weren't an important

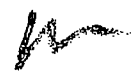
concern, there may be problems establishing the credibility of analyses that are too quick and dirty.

For example, take the idea that abatement cost can be approximated by the area of a triangle whose height is \$100/ton and whose length is the amount of emissions reduction. A linear marginal abatement cost curve is only one possible assumption and seems more defensible a priori than others if one put any stock in the technologists' view, in fact, something more convex would seem better. So suppose one specified the marginal abatement cost to be $100x^1 + a$, where x is the fraction of total targeted emissions reductions so $0 < x < 1$. The area under this curve will be quite sensitive to the magnitude of the exponent a .

All this is not to diss entirely the value of quick analyses, but to the extent possible I would try to use model results such as those you are requesting from Edmonds and Richels. Though time is limited, others could be asked to contribute as well (e.g., Goulder, Nordhaus, Pizer, Shackleton). The results of utility sector models could be used to give you a better picture of what kinds of capital stock turnover is sensible under different conditions, with less dependence on ad hoc assumptions and/or an easier time of ascertaining how such assumptions can drive results.

That is about all I want to say about the work plan itself. I hope these comments are useful. At this point I need more guidance from you about how I might be useful. I could, for example, assist in some way in the consideration of the delayed reductions policy options. I might also be able to help pull some information together about analyses with a catastrophe probability. I look forward to hearing from you. Thanks.

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CEA WORK-PROGRAM ON GCC

Jeff Frankel 8/11/97

WHO (and when)

Targets and timetables (TOP PRIORITY)

The importance of allowing time for capital turnover --

Case-study illustration:

Graph of replacement chronology of US power-generating plants
(make stylized assumptions on plant life if necessary).

of plants, and cost of replacement, against year.

> RL (+CS)

The economically-optimal path.

In what year is peak of US emissions?

Of other Annex I?

In what year do they return to 1990 levels?

(1) Minimizing cost/benefit balance
(minus uncertainty or credibility problems).

=> no peak at all? Just slowed rise in emissions?

Need results from Integrated Assessment Models.

> JS + RL

- Nordhaus
- Manne-Richels?
- Wigley, Richels, Edmonds? “
- Other EMF models?
- Cline?

(2) Minimizing cost of a given level of 2100 concentrations

- Manne-Richels (peak in 2050)
- Others (as above)?
- An in-house models: SGM

(3) Compare costs and benefits of “1990 by 2010”
to “peak in 2015 and return to 1990 by ___”

and to doing nothing (“business as usual”).

> JS + RL (+CS)

Costs are (I) price of carbon, gasoline, coal...

(ii) effects on income and consumption

Benefits are (I) emissions and concentration

(ii) implied effect on temperature in 2050 or 2100

(using simple linear interpolation from IPCC estimate)

- Any of the IA/EMF models
- Any of the IAT models (DRI, MarkalM, SGM)
- Shackleton and G-cubed
- Other?

Analogies with 1970s oil shocks

Is magnitude the same?

> JA + RL

DONE

How much difference does it make that this would be pre-announced? (+CS)

” That there would be no transfer to OPEC?

Any bogus reasons why the IAT models did not find such adverse effects?

Did they assume that the Fed could somehow offset supply shocks?

Technology and "free lunches"

- Critique 5-Labs Study > JA DRAFT DONE
- More general critique of the "technology" free lunch > RL + JA
 - Assumption that people ignore money-saving opportunities, that govt. Pgms. Help (e.g., can change discount rates and AEEs), that common people are as capable as engineers, that people systematically over-consume energy but not other things, that they live in ideal homes, that energy-price uncertainty plays no role.... Double-counting pgms (in baseline and policy path).
- We're "technology optimists":
 - Historical relationship between prices and EEI > JF+CS+QF DONE

Analyze escape clause proposals

- What would be appropriate carbon prices for ceiling? > JS+RL
 - If 2015 emissions peak and (e.g.) 1990 levels in 2040 (As under blueprint)
 - If 1990 levels in 2010 (As enviros want)
- What do other agencies have in mind? > RL Jf
 - ("Pomerance-Gruber paper due Aug. 8")
- Global price cap and sales, rather than country-by-country?

Uncertainty

- > JS
- Allow for a probability of climate disaster
- and apply expected welfare,
 - add risk-aversion
 - add option analysis (with irreversible investment)
 - allow for imperfect political credibility of promises

Domestic Implementation

- Incidence of increase in energy prices > Andy
- Has there been a "reluctance to trade" in SO2 pgm? > JF
- Should revenues be used to finance soc.sec.? >
 - Compute likely amount and path of revenue thru 2075 > CC + JA
- Tradeoff between stringency and flexibility > JS

LDCs

Need proposed formulas for LDC participation

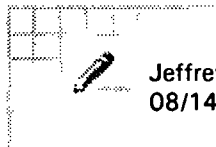
- > RL + JF
- What is threshold income level for blueprint proposal?
 - defined so as to include only State Dept.'s "Annex B" countries
 - What is a reasonable emissions path formula for future LDC participation?
 - = F(income, population, 1990 emission levels)?
 - Or as reduction of emissions growth rate?

US competitiveness if LDCs don't participate

- > PO+JF memo of 8/10
- Anyone care to take on a N-factor, N-good, N-country trade model?
 - N=2, or N=3

Other

- Monitor reports from negotiations (coming via State) >



Jeffrey A. Frankel
08/14/97 12:08:36 PM

Record Type: Record

To: Randall W. Lutter/CEA/EOP, Jason Shogren/CEA/EOP, Joseph E. Aldy/CEA/EOP
cc: Cristian J. Santesteban/CEA/EOP, Quindi C. Franco/CEA/EOP
Subject: gcc priority

We should have by late this week a memo outlining the options regarding targets and timetables and their economic effects (and their temperature effects, as Cristian and Quindi have been doing). To recap, the economic variables are those reported in the IAT analysis, plus the magnitude of international permit trading. At the moment, the number of scenarios is too large; we will have to narrow it down. (In addition to the triple of "stabilize by 2010, 2020, or later", we have the triple of +10%, +0, or -10%, AND Larry wants to consider 1995 as the level of stabilization as an alternative to 1990.* That's too many combinations.)

QUESTION: What can we expect to have from the models, in-house or outside, by Wed. or Thurs. next week, in addition to what we already have?
Of our many high-priority tasks, I think targets and timetables is the highest.

(* I think Larry's concern is most easily satisfied by a computation of the difference is US emissions in 1995 vs. 1990, times the shadow price of carbon in our estimates, and the same for the rest of the world. Who can do this? Is Ray Squitieri already working on it?)
JF

leak 2050
1990 levels by 2020

Treas. 8/13/97

Agenda for Climate Change

- ✓ Get Ray and Randy coordinated with EPA on drafting the "options" paper on domestic emissions paper. Representatives for EPA will be Mike Shelby (auctions) and Brian McLean (allocation). In addition to EPA, CEA, and Treasury, each team will include a representative of DoE.
- ✓ Get Toman and Hassett on board
- ✓ Paper: analogy between Kyoto and OPEC oil shocks¹

Highest priority

- Briefing for Rubin before he meets with POTUS?
- Technology paper
- Finish emissions trading "questions" paper
- Begin work on trading "options" paper e.g. grandfather vs auction.

Medium priority

- Get copy of latest draft of international trading paper (Doniger), and pass it to OASIA and General Counsel's office
- What is "federal undertakings" paper about? (Goodman and Glauthier)
- Paper: relative favorability of 1990 by 2010, 1995 by 2010, 2000 by 2010, etc.
- Meetings with industry representatives (Lara)
- Decide how we want to use heavyweight consultants (and who they are). Candidates include Dick Schmalensee (MIT), Bill Nordhaus (Yale), Richard Richels (Electric Power Research Institute), Tom Rutherford (University of Colorado), John Weyant (Stanford).

¹We need to be sure that we are in step with CEA thinking on this issue. They point out a couple of distinctions: that OPEC involves a transfer of wealth abroad whereas Kyoto doesn't, except in circumstances where it is better for us to transfer than not; also, the constraints imposed by Kyoto will be known long in advance rather than hitting as a surprise.

Papers related to the Interagency Process

1. Domestic emissions trading: options paper (DW, RG) Tr
on top of
2. Developing country commitments (RG) "ok"
3. Joint implementation and additionality (JF)
4. International emissions trading (JF)
5. Technology (RG, JS)
6. Transition assistance (?)

Other miscellaneous interagency papers

7. Relation between domestic and international emissions trading systems paper by Jim Simon of DoJ (DW)
8. Escape clauses paper by Harris (DW)
9. According to David Gardiner, Victoria Greenfield in Eisenstat's office is working on a separate paper dealing with *economic* aspects of escape clauses. We need to engage on this.
10. An escape clause paper to be written by OEP
11. Competitiveness/trade issues paper by Orszag

(EA)
we could
willing to
take pen

1. Domestic emission trading

Tasks

- a. Get Toman and Boorstin plugged in on this ASAP (DW)

Proposed outline of paper:

Throughout, the paper must lay bare the costs associated with each of the options in a hard-headed fashion.

- a. Should be a national market for a homogeneous commodity: x tons of CO₂ equivalent (explain why)
- b. Specification of GHGs to be covered
- c. Permit-holding requirement should be imposed far upstream (explain why)
- d. Possible methods of initial distribution
- i. Auction: must make the argument that with pre-existing distortions, a program of control will be extremely costly unless permits are auctioned and revenues are recycled.
 - ii. Administrative
 - iii. Re: performance standards: this is not being presented as an option because there is a consensus that either of the first two methods is superior (give a strong statement why, drawing on the Executive Summary of the first paper)
- e. Trading: central exchange *à la* SO₂
- f. Length of permits: one year (?)
- g. What to do with auction revenue
- i. Get Tax Policy participation on this
 - ii. Include rationale for why auction proceeds should not be used to promote R&D or diffusion of existing technologies (borrow from paper RG is writing on Technology)
- h. Monitoring/compliance issues?

2. Developing country commitments

- a. Construct a set of baselines that will neither constrain growth greatly nor transfer an enormous volume of resources abroad. (This would start by constructing a “business as usual” baseline.) (LARA)
- b. Is this the place to make a strong case on eliminating subsidies? Coordinate with JF.

3. Joint implementation and additionality

- a. Is World Bank working on this issue? (BEN)

4. International emissions trading

- a. We are also listed as co-authors on this, again along with Doniger. Have we engaged? A draft allegedly will be distributed August 13.
- b. Does a preliminary draft exist? If so, critique it.

5. Technology (RG, JS)

Tasks

- a. Get Bob Boorstin involved in this.
- b. Let T.J. know we will be writing our own paper.
- c. Is there any point in having a further conversation with Gotbaum?
- d. Find out who economics reviewers were. We think Abe Haspel was one, but we need to know who the others were, and get their comments if possible.
- e. Get more reviewers: Kevin Hassett for sure, possibly others including Dale Jorgenson, Howard Gruenspecht, ...
- f. **We really need to get moving on this topic. As you know, PCAST and DoE Labs are preparing reports to the President for October 1 delivery. We need to see drafts of these reports.**

Proposed outline of paper

Message: Technology is good; here's what technology can realistically be expected to accomplish.

- a. Explain why we think the "Five Labs" study is not credible
- b. Define the proper scope for government involvement in the development of technology (essentially what Robert has already written)
- c. Discuss why we think the enthusiasts claims are wrong: hurdle rates *should* be high (Pindyck in irreversible investment), and engineering estimates routinely promise too much (Metcalf and Rosenthal).
- d. Very sketchy (and possibly confused) notes of conversation with LS:
 - i. OMB paper substantially overstates...
 - ii. Doesn't recognize that there would be major questions of implementation; e.g., any effort to mandate adoption would run into a variety of problems;
Need some concrete examples: tangible bad consequences
 - iii. Call Paul Portney, Schmalensee, Joskow, others who understand why CAFE is bad, and get them to help us transfer arguments to this case.
 - iv. Talk to industry

10. Economic aspects of escape clauses (DW with Ukockis)

Tasks

- a. Make contact with Victoria Greenfield. and see what she's doing.
- b. Points to be made: escape clause utilization should be short-lived: If you find that you're "escaping" every year for 10 years in a row, the mechanism probably isn't designed correctly.
- c. How do we think about the cyclical aspects of this? If the economy booms, it can be argued that (i) that would be the time that we could *best* afford to control carbon emissions, so a high price is appropriate; (ii) the high price of permits would help restrain the economy.

Miscellaneous Memos not related to the Interagency Process

1. *(Squitieri and Lutter)* What would Kyoto mean for real families? Suppose we do 1990 by 2010; how much will the annual bill for fuel oil go up for the average family that heats by fuel oil in the Northeast? How much will the annual bill for electricity go up for the average family that has central air conditioning and lives in the South or Southwest? How much will the annual bill go up for the average family that heats with natural gas and lives in Michigan or Wisconsin?

What will Kyoto mean for average annual driving expenses?

What will Kyoto mean for the average price of a flight from New York to LA? From Chicago to Houston?

2. *(Lutter and Squitieri)* What is the age distribution of coal-fired electricity generating plants? How much does it cost to retrofit a coal-fired plant so that it can burn natural gas? How much would it cost to retrofit every existing coal-fired plant this year? Suppose we extend the horizon to five years, and retrofit only the plants that remain in service at the end of that period? Ditto for 10 years, 20 years. In general, the goal is to explain why giving a long lead time helps: Synchronizing with the normal turnover of the capital stock. Any other information you can provide that is relevant to "tracing out the marginal cost curve" would be great.

3. *(Lutter and Squitieri)* What is the age distribution of nuclear plants? How much will carbon emissions increase if every nuclear plant currently in operation is retired from service according to current schedule and is replaced by a natural-gas-fired plant of equal capacity?

4. *(Gruber)* Nordhaus's argument that achieving 1990 levels by 2010 is worse than doing nothing.

5. *(Kitchen, Squitieri, Shogren)* For a given *concentration* level in 2100, calculate

- i. the optimal unconstrained path
- ii. the optimal path conditional on returning emissions to 1990 levels by 2010
- iii. the optimal path conditional on stabilizing emissions in 2015

6. *(Kitchen, Squitieri, Shogren)* Calculate the path of temperature under the Frankel plan, and compare it to (i) baseline, (ii) return emissions to 1990 levels by 2010

7. *(Kitchen, Squitieri, Lara, Ben)* How large will the financial flows be between Annex I countries?

8. *(JF)* Options to increase credibility

DRAFT — UNDER CONTINUOUS REVISION

e.g., talking about permits and their implications

9. (JG, Boorstin, Williams) Issues of political economy

What are the politics of auctions versus administrative allocation? What are the politics of alternative methods of administrative allocation? Who are the various constituencies, and what are their relative strengths? Will a politically feasible scheme end up looking like the “windfall profits” tax of the 1970s?

10. What will the incidence be of a permits program? What does it imply, for example, for the utility bills of the poor? Who will bear the cost in utilities sector: stockholders? Workers? Ratepayers?

11. A study of the EU bubble and the advantage it gives them.



Jason Shogren

08/21/97 10:11:00 AM



Record Type: Record

To: Jeffrey A. Frankel/CEA/EOP, Michele Jolin/CEA/EOP, Randall W. Lutter/CEA/EOP, Joseph E. Aldy/CEA/EOP

cc:

Subject: agenda for climate change work

----- Forwarded by Jason Shogren/CEA/EOP on 08/21/97 10:10 AM -----



JONATHAN.GRUBER @ MS01.DO.treas.sprint.com

08/21/97 09:53:00 AM

Record Type: Record

To: Jason Shogren

cc:

Subject: agenda for climate change work

Date: 08/21/1997 09:46 am (Thursday)

From: Jonathan Gruber

To: squitierir, muldoonl, gillinghamr, wilcoxd, robertsjoh, shogren, jonesb

Subject: agenda for climate change work

Folks -

Here is an agenda for what remains of our climate change work, at least for August. This is based on the treasury/CEA meeting yesterday. Jay, could you please pass this on to others at CEA. Comments on anything that I have left off, or on misplaced responsibilities, would be appreciated. But I am pleased that this seems (to me at least) a manageable set of tasks - although that's easy for me to say since I'll be on vacation next week!

In terms of Treasury folks, the basic responsibilities break down as:

GRUBER - comments on various papers, incidence work

SQUITIERI - domestic emissions options, targets and timetables

GILLINGHAM - technology

ROBERTS - modelling targets and timetables, international flows memo

WILCOX - comments on various memos

JONES - incidence work, Nordhaus summary

MULDOON - political economy summaries

Joint Treasury/CEA Climate Change Agenda - August 22, 1997 - annotated

I) Domestic Emissions Trading

A) Strategy: should we permit EPA to include third option?

Larry's response: we should follow the following strategy:

1) Work inside EPA to get them to kill this internally. This should proceed through Gardiner. WILCOX should take the lead on this.

2) If not killed internally, we should insist that if it is included as a third option, it is prefaced by a statement of the type "This option is completely opposed by the economic agencies".

B) SQUITIERI continues to work with EPA to refine the options that are included (at least auction and allocation, perhaps hybrid depending on (A)).

C) SQUITIERI arranges discussion of auction mechanism with Kwerel and/or other auction experts as soon as possible.

Product Goal: First draft of options paper by 8/29

II) Technology

A) GILLINGHAM and SHOGREN send comments to DoE on 5 labs study - DONE

B) GILLINGHAM, SHOGREN, and FRANKEL peruse DoE's response to our comments, and give signoff (or not) to 5 labs study

C) GILLINGHAM and SHOGREN work on broader technology paper.

D) Try to check in with TJ Glauthier to see what he envisions for technology options paper - make sure that it reflects our concerns, as laid out in our broader paper - GILLINGHAM

Product Goal: Finalized version of broader technology paper by 8/29

III) Targets and Timetables

A) FRANKEL, SHOGREN, SQUITIERI, and ROBERTS work with modellers to get runs of different paths of emissions, producing data on concentrations, temperatures, and costs to the economy (CEA is leading on this - rough draft of memo exists).

B) JONES writes up a summary of the Nordhaus argument that 1990 by 2010 is worse than nothing. ———→ JONES with TJT

Product Goal: Have rough drafts of memo on targets and timetables by 8/29

IV) Other Analytics

A) MULDOON works on effects of policies on the typical family.

B) ^{Frankel}SANTEBASAN works on age distribution of plants, coal and nuclear (mostly done, incorporated in Frankel T&T memo).

C) GRUBER and JONES work on incidence (JONES is doing memo for early next week - should pass to WILCOX for review).

D) ROBERTS works on memo on size of financial flows

E) MULDOON works on political economy lessons from BTU tax and Carter oil allocation scheme. *give him that part of T&T*

Product Goal: Have at least rough drafts of memos on each of these topics by 8/29

V) Other Papers

A) Developing country commitments

B) JI and additionality

C) International Trading

- GRUBER rough comments passed on to WILCOX on 8/22. OASIA is working on providing comments - e-mail with some comments from Truman Semans has been forwarded.

D) Escape clause - GRUBER comments passed on to Victoria Greenfield. FRANKEL working on analytics of when we would need escape clause - WILCOX and others should consult with him on this - this could be a big issue.

E) Paper by USTR on Domestic Implementation and Trade - ROBERTS and WILCOX to provide comments by 8/29.

F) Paper by Justice on relationship between international and domestic trading - WILCOX to check on status and provide comments early in week of 8/25.

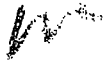
G) Competitiveness paper - WILCOX to check on status and provide comments by 8/29

H) Pomerance and Hunker have been tasked to produce a paper on negotiating implications of different targets and timetables by 8/22 - WILCOX to check on status and provide comments by 8/29 (perhaps tied to what we find from analysis in III)

I) Federal Undertakings paper due 8/29 - WILCOX and/or GRUBER to provide comments week

of 9/1

J) Early credit memo from Orszag - GILLINGHAM and/or WILCOX to provide comments on Monday, 8/25.



Agenda for Climate Change

- ✓ Get Ray and Randy coordinated with EPA on drafting the “options” paper on domestic emissions paper. Representatives for EPA will be Mike Shelby (auctions) and Brian McLean (allocation). In addition to EPA, CEA, and Treasury, each team will include a representative of DoE.
- ✓ Get Toman and Hassett on board
- ✓ Paper: analogy between Kyoto and OPEC oil shocks¹

Highest priority

- Briefing for Rubin before he meets with POTUS?
- Technology paper
- Finish emissions trading “questions” paper
- Begin work on trading “options” paper

Medium priority

- Get copy of latest draft of international trading paper (Doniger), and pass it to OASIA and General Counsel’s office
- What is “federal undertakings” paper about? (Goodman and Glauthier)
- Paper: relative favorability of 1990 by 2010, 1995 by 2010, 2000 by 2010, etc.
- Meetings with industry representatives (Lara)
- Decide how we want to use heavyweight consultants (and who they are). Candidates include Dick Schmalensee (MIT), Bill Nordhaus (Yale), Richard Richels (Electric Power Research Institute), Tom Rutherford (University of Colorado), John Weyant (Stanford).

¹We need to be sure that we are in step with CEA thinking on this issue. They point out a couple of distinctions: that OPEC involves a transfer of wealth abroad whereas Kyoto doesn’t, except in circumstances where it is better for us to transfer than not; also, the constraints imposed by Kyoto will be known long in advance rather than hitting as a surprise.

Papers related to the Interagency Process

1. Domestic emissions trading: options paper (DW, RG)
2. Developing country commitments (RG)
3. Joint implementation and additionality (JF)
4. International emissions trading (JF)
5. Technology (RG, JS)
6. Transition assistance (?)

Other miscellaneous interagency papers

7. Relation between domestic and international emissions trading systems paper by Jim Simon of DoJ (DW)
8. Escape clauses paper by Harris (DW)
9. According to David Gardiner, Victoria Greenfield in Eisenstat's office is working on a separate paper dealing with *economic* aspects of escape clauses. We need to engage on this.
10. An escape clause paper to be written by OEP
11. Competitiveness/trade issues paper by Orszag

1. Domestic emission trading

Tasks

- a. Get Toman and Boorstin plugged in on this ASAP (DW)

Proposed outline of paper:

Throughout, the paper must lay bare the costs associated with each of the options in a hard-headed fashion.

- a. Should be a national market for a homogeneous commodity: x tons of CO₂ equivalent (explain why)
- b. Specification of GHGs to be covered
- c. Permit-holding requirement should be imposed far upstream (explain why)
- d. Possible methods of initial distribution
- i. Auction: must make the argument that with pre-existing distortions, a program of control will be extremely costly unless permits are auctioned and revenues are recycled.
 - ii. Administrative
 - iii. Re: performance standards: this is not being presented as an option because there is a consensus that either of the first two methods is superior (give a strong statement why, drawing on the Executive Summary of the first paper)
- e. Trading: central exchange *à la* SO₂
- f. Length of permits: one year (?)
- g. What to do with auction revenue
- i. Get Tax Policy participation on this
 - ii. Include rationale for why auction proceeds should not be used to promote R&D or diffusion of existing technologies (borrow from paper RG is writing on Technology)
- h. Monitoring/compliance issues?

2. Developing country commitments

- a. Construct a set of baselines that will neither constrain growth greatly nor transfer an enormous volume of resources abroad. (This would start by constructing a “business as usual” baseline.) (LARA)
- b. Is this the place to make a strong case on eliminating subsidies? Coordinate with JF.

3. Joint implementation and additionality

- a. Is World Bank working on this issue? (BEN)

4. International emissions trading

- a. We are also listed as co-authors on this, again along with Doniger. Have we engaged? A draft allegedly will be distributed August 13.
- b. Does a preliminary draft exist? If so, critique it.

5. Technology (RG, JS)

Tasks

- a. Get Bob Boorstin involved in this.
- b. Let T.J. know we will be writing our own paper.
- c. Is there any point in having a further conversation with Gotbaum?
- d. Find out who economics reviewers were. We think Abe Haspel was one, but we need to know who the others were, and get their comments if possible.
- e. Get more reviewers: Kevin Hassett for sure, possibly others including Dale Jorgenson, Howard Gruenspecht, ...
- f. **We really need to get moving on this topic. As you know, PCAST and DoE Labs are preparing reports to the President for October 1 delivery. We need to see drafts of these reports.**

Proposed outline of paper

Message: Technology is good; here's what technology can realistically be expected to accomplish.

- a. Explain why we think the "Five Labs" study is not credible
- b. Define the proper scope for government involvement in the development of technology (essentially what Robert has already written)
- c. Discuss why we think the enthusiasts claims are wrong: hurdle rates *should* be high (Pindyck in irreversible investment), and engineering estimates routinely promise too much (Metcalf and Rosenthal).
- d. Very sketchy (and possibly confused) notes of conversation with LS:
 - i. OMB paper substantially overstates...
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Need some concrete examples: tangible bad consequences
 - iii. Call Paul Portney, Schmalensee, Joskow, others who understand why CAFE is bad, and get them to help us transfer arguments to this case.
 - iv. Talk to industry

10. Economic aspects of escape clauses (DW with Ukockis)

Tasks

- a. Make contact with Victoria Greenfield, and see what she's doing.
- b. Points to be made: escape clause utilization should be short-lived: If you find that you're "escaping" every year for 10 years in a row, the mechanism probably isn't designed correctly.
- c. How do we think about the cyclical aspects of this? If the economy booms, it can be argued that (i) that would be the time that we could *best* afford to control carbon emissions, so a high price is appropriate; (ii) the high price of permits would help restrain the economy.

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1. (*Squitieri and Lutter*) What would Kyoto mean for real families? Suppose we do 1990 by 2010; how much will the annual bill for fuel oil go up for the average family that heats by fuel oil in the Northeast? How much will the annual bill for electricity go up for the average family that has central air conditioning and lives in the South or Southwest? How much will the annual bill go up for the average family that heats with natural gas and lives in Michigan or Wisconsin?

What will Kyoto mean for average annual driving expenses?

What will Kyoto mean for the average price of a flight from New York to LA? From Chicago to Houston?

2. (*Lutter and Squitieri*) What is the age distribution of coal-fired electricity generating plants? How much does it cost to retrofit a coal-fired plant so that it can burn natural gas? How much would it cost to retrofit every existing coal-fired plant this year? Suppose we extend the horizon to five years, and retrofit only the plants that remain in service at the end of that period? Ditto for 10 years, 20 years. In general, the goal is to explain why giving a long lead time helps: Synchronizing with the normal turnover of the capital stock. Any other information you can provide that is relevant to “tracing out the marginal cost curve” would be great.

3. (*Lutter and Squitieri*) What is the age distribution of nuclear plants? How much will carbon emissions increase if every nuclear plant currently in operation is retired from service according to current schedule and is replaced by a natural-gas-fired plant of equal capacity?

4. (*Gruber*) Nordhaus’s argument that achieving 1990 levels by 2010 is worse than doing nothing.

5. (*Kitchen, Squitieri, Shogren*) For a given *concentration* level in 2100, calculate

- i. the optimal unconstrained path
- ii. the optimal path conditional on returning emissions to 1990 levels by 2010
- iii. the optimal path conditional on stabilizing emissions in 2015

6. (*Kitchen, Squitieri, Shogren*) Calculate the path of temperature under the Frankel plan, and compare it to (i) baseline, (ii) return emissions to 1990 levels by 2010

7. (*Kitchen, Squitieri, Lara, Ben*) How large will the financial flows be between Annex I countries?

8. (JF) Options to increase credibility

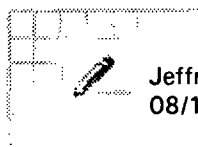
e.g., talking about permits and their implications

9. (JG, Boorstin, Williams) Issues of political economy

What are the politics of auctions versus administrative allocation? What are the politics of alternative methods of administrative allocation? Who are the various constituencies, and what are their relative strengths? Will a politically feasible scheme end up looking like the “windfall profits” tax of the 1970s?

10. What will the incidence be of a permits program? What does it imply, for example, for the utility bills of the poor? Who will bear the cost in utilities sector: stockholders? Workers? Ratepayers?

11. A study of the EU bubble and the advantage it gives them.



Jeffrey A. Frankel
08/13/97 10:32:58 AM

Record Type: Record

To: Randall W. Lutter/CEA/EOP
cc: Joseph E. Aldy/CEA/EOP, Jason Shogren/CEA/EOP
Subject: GCC: another analytical task to add to our list

We may need estimates of likely value of permits traded internationally, circumstances determining US buyer or seller, and US value of permits traded. There was a bit on this in the IAT; but we want also to use G-cubed and other sources, including back-of-the-envelope calculations of our own.

Priority: not as urgent as the couple of top-priority tasks we have discussed. But it goes on the list.

thanks
JF

Trick - (EA)

Taxes + Ymetabls

represent views of others
Have to air fundamental disagreements
what does it take to achieve
say what others think

LS frame relative to BTU tax

CEA WORK-PROGRAM ON GCC

Jeff Frankel 8/11/97

WHO (and when)

Targets and timetables (TOP PRIORITY)

The importance of allowing time for capital turnover --

Case-study illustration:

Graph of replacement chronology of US power-generating plants
(make stylized assumptions on plant life if necessary).

of plants, and cost of replacement, against year.

> RL (+CS)

The economically-optimal path.

In what year is peak of US emissions?

Of other Annex I?

In what year do they return to 1990 levels?

(1) Minimizing cost/benefit balance

(minus uncertainty or credibility problems).

=> no peak at all? Just slowed rise in emissions?

Need results from Integrated Assessment Models.

> JS + RL

- Nordhaus
- Manne-Richels?
- Wigley, Richels, Edmonds? “
- Other EMF models?
- Cline?

(2) Minimizing cost of a given level of 2100 concentrations

- Manne-Richels (peak in 20__)
- Others (as above)?
- An in-house models: SGM

(3) Compare costs and benefits of “1990 by 2010”

to “peak in 2015 and return to 1990 by __”

and to doing nothing (“business as usual”).

> JS + RL (+CS)

Costs are (I) price of carbon, gasoline, coal...

(ii) effects on income and consumption

Benefits are (I) emissions and concentration

(ii) implied effect on temperature in 2050 or 2100

(using simple linear interpolation from IPCC estimate)

- Any of the IA/EMF models
- Any of the IAT models (DRI, MarkalM, SGM)
- Shackleton and G-cubed
- Other?

Analogies with 1970s oil shocks

Is magnitude the same?

> JA + RL

DONE

How much difference does it make that this would be pre-announced? (+CS)

”

That there would be no transfer to OPEC?

Any bogus reasons why the IAT models did not find such adverse effects?

Did they assume that the Fed could somehow offset supply shocks?

Technology and "free lunches"

- Critique 5-Labs Study > JA DRAFT DONE
- More general critique of the "technology" free lunch > RL + JA
 - Assumption that people ignore money-saving opportunities, that govt. Pgms. Help (e.g., can change discount rates and AEEL), that common people are as capable as engineers, that people systematically over-consume energy but not other things, that they live in ideal homes, that energy-price uncertainty plays no role.... Double-counting pgms (in baseline and policy path).
- Valid grounds for "technology optimism":
 - Historical relationship between prices and EEI > JF+CS+QF DONE

Analyze escape clause proposals

- What would be appropriate carbon prices for ceiling? > JS+RL
- If 2015 emissions peak and
(e.g.) 1990 levels in 20__
If 1990 levels in 2010
- What do other agencies have in mind? > RL
 - ("Pomerance-Gruber paper due Aug. 8")
 - Global price cap and sales, rather than country-by-country?

Uncertainty

> JS

Allow for a probability of climate disaster

- and apply expected welfare,
- add risk-aversion
- add option analysis (with irreversible investment)
- allow for imperfect political credibility of promises

Domestic Implementation

- Incidence of increase in energy prices >
- Has there been a "reluctance to trade" in SO₂ pgm? > JF
- Should revenues be used to finance soc.sec.? >
 - Compute likely amount and path of revenue thru 2075 > CC + JA
- Tradeoff between stringency and flexibility > JS

LDCs

Need proposed formulas for LDC participation

> RL + JF

- What is threshold income level for blueprint proposal?
 - defined so as to include only State Dept.'s "Annex B" countries
- What is a reasonable emissions path formula for future LDC participation?
 - = F(income, population, 1990 emission levels)?
 - Or as reduction of emissions growth rate?

US competitiveness if LDCs don't participate

> PO+JF memo of 8/10

- Anyone care to take on a N-factor, N-good, N-country trade model?
 - N=2, or N=3

Other

Monitor reports from negotiations (coming via State)

>

WORK-PROGRAM

JF 8/9/97

WHO (and when)

Treas

Targets and timetables (TOP PRIORITY)

The importance of allowing time for capital turnover --

Case-study illustration:

Graph of replacement chronology of US power-generating plants
(make stylized assumptions on plant life if necessary).

of plants, and cost of replacement, against year.

1. Raully
2. (Saut)

Squieren

The economically-optimal path.

In what year is peak of US emissions?

Of other Annex I?

In what year do they return to 1990 levels?

(1) Minimizing cost/benefit balance

(minus uncertainty or credibility problems).

=> no peak at all? Just slowed rise in emissions?

Need results from Integrated Assessment Models.

- Nordhaus *peaks in 22nd century*
- Manne-Richels? Have Gillingham/Shogren called them?
- Wigley, Richels, Edmonds? "
- Other EMF models?
- Cline?

1. Jay
2. Raully

Squieren

(2) Minimizing cost of a given level of 2100 concentrations

- Manne-Richels (peak in 2050)
- Others (as above)? *W, R, E*
- Can any in-house models (as below) do it? *SGM*

(3) Compare costs and benefits of "1990 by 2010"

to "peak in 2015 and return to 1990 by ____"
and to doing nothing ("business as usual").

Costs are (i) price of carbon, gasoline, coal...

(ii) effects on income and consumption

Benefits are (i) emissions and concentration

(ii) implied effect on temperature in 2050 or 2100

(using simple linear interpolation from IPCC estimate)

- Any of the IA/EMF models
- Any of the IAT models (DRI, MarkalM, SGM)
- Shackleton and G-cubed
- Other?

* (MSTN S)

Analogies with 1970s oil shocks

Is magnitude the same?

(7/28 memo from Jay) >

How much difference does it make that this would be pre-announced?

"

That there would be no transfer to OPEC?

Any bogus reasons why the IAT models did not find such adverse effects?

Did they assume that the Fed could somehow offset supply shocks?

(Ph. 1)

Raully + Joe

Cristian

Ray
+ Treas.

Elucidate the dangers of Wishful Thinking

- Critique 5-Labs Study Coordinate with Treas.
- More general critique of the "technology" free lunch

Assumption that people ignore money-saving opportunities, that govt. Pgms. Help (e.g., can change discount rates), that common people are as capable as engineers, that people systematically over-consume energy but not other things, that they live in ideal homes, that energy-price uncertainty plays no role.... Double-counting pgms (in baseline and policy path).

- Historical relationship between prices and EEI (Frankel-Sant.-Franco memo)

Analyze escape clause proposals

- What would be appropriate carbon prices for ceiling? >

If 2015 emissions peak and

(e.g.) 1990 levels in 2040

If 1990 levels in 2010

(As under blueprint)
(As enviros want)

Jay
+ Randy

- What do other agencies have in mind? Coord. With Treasury >
("Pomerance-Gruber paper due Aug. 8")
- What else did Summers have in mind? "
Global price cap, rather than country-by-country?

Uncertainty

Is there anything to be done in the way of assuming probabilities

- and applying expected welfare,
- with or without risk-aversion
- and option analysis (with irreversible investment)
- allowing for imperfect political credibility

Domestic Implementation

- Incidence of increase in energy prices >
- Has there been a "reluctance to trade" in SO₂ pgm? >
- Should revenues be used to finance soc. sec.? >

Compute likely amount and path of revenue thru 2025

trade-off between stringency & flexibility

Chris C. + Joe

Jay S

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- What is threshold income level for blueprint proposal?
defined so as to include only State Dept.'s "Annex B" countries
- What is a reasonable emissions path formula for future LDC participation?
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E.g., Nordhaus proposal

US competitiveness if LDCs don't participate

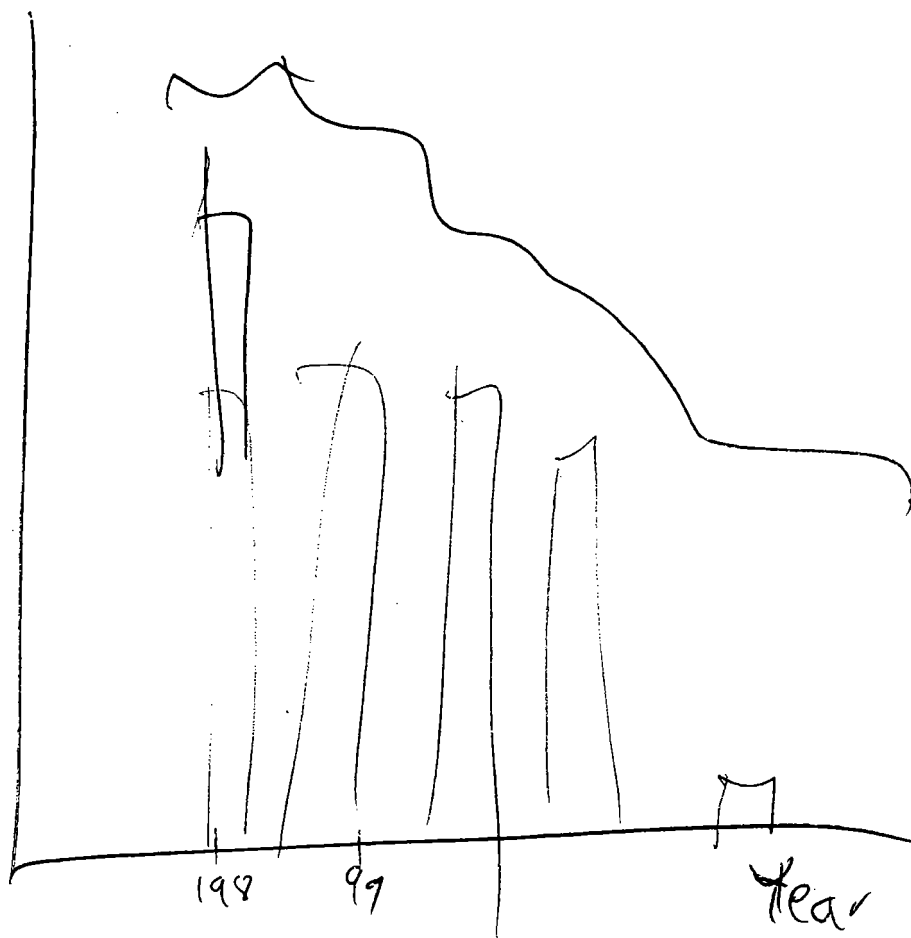
As in Orszag-Frankel-Shogren memo of 8/10/97

- Anyone care to take on a N-factor, N-good, N-country trade model?
N=2, or
N=3

Other

Monitor reports from negotiations (coming via State) >

Monitor _____ >



(KAS) [Toman T.V. 15]

Agenda for Climate Change

1. Very near term

- Briefing for Rubin before he meets with POTUS
- Get Ray and Randy coordinated with EPA on drafting the “options” paper on domestic emissions paper. Representatives for EPA will be Mike Shelby (auctions) and Brian McLean (allocation). In addition to EPA, CEA, and Treasury, each team will include a representative of DoE.
- Get a copy from Gruber of earlier work on how to use auction proceeds
- Get Toman and Hassett on board
- Decide how we want to use heavyweight consultants (and who they are)
 - Dick Schmalensee (MIT)
 - Bill Nordhaus (Yale)
 - Richard Richels (Electric Power Research Institute)
 - Tom Rutherford (University of Colorado)
 - John Weyant (Stanford)
- Paper: analogy between Kyoto and OPEC oil shocks

We need to be sure that we are in step with CEA thinking on this issue. They point out a couple of distinctions: that OPEC involves a transfer of wealth abroad whereas Kyoto doesn't, except in circumstances where it is better for us to transfer than not; also, the constraints imposed by Kyoto will be known long in advance rather than hitting as a surprise.
- Paper: relative favorability of 1990 by 2010, 1995 by 2010, 2000 by 2010, etc.

LS: “We need to lay bare that anything with 1990 is plausibly a transfer of billions of dollars to Europe and Japan relative to 1995.” (Is this right?)

“Can the costs of 1990 by 2010 be substantially reduced by pushing attainment back to 2020, 2030, or 2040?” (Note that this is a different question from the preceding one because it focuses on sliding the attainment date rather than the reference date.)
- Get draft of paper on competitiveness/trade issues from Orszag
- What is “federal undertakings” paper about? (Goodman and Glauthier)
- Get copy of latest draft of international trading paper (Doniger), and pass it to OASIA and General Counsel's office
- Short paper: impact of \$100/ton price of carbon permit on energy prices

2. Somewhat longer term

- Meetings with industry representatives (Lara)

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1. Domestic emissions trading: options paper (DW, RG)
2. Developing country commitments (RG)
3. Joint implementation and additionality (JF)
4. International emissions trading (JF)
5. Technology (RG, JS)
6. Transition assistance (?)

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- a. A draft of this is supposed to be distributed by August 13 (Pomerance and Hunker). Should we be participating in the preparation of this draft? (RG)
- b. Construct a set of baselines that will neither constrain growth greatly nor transfer an enormous volume of resources abroad. (This would start by constructing a “business as usual” baseline.) (LARA)
- c. Is this the place to make a strong case on eliminating subsidies? Coordinate with JF.

3. Joint implementation and additionality

Tasks

- a. We are listed as co-authors on this, along with Doniger. Are we in fact supposed to be doing anything? A draft allegedly is due August 13. Is there a pre-draft that we can look at?
- b. Is World Bank working on this issue? (BEN)
- c. Make sure that the paper adequately states the concern with JI, namely that in the absence of realistic baselines, one possible outcome is that developing countries emit as much as, or more than, they would have otherwise, and developed countries emit strictly more.

4. International emissions trading

Tasks

- a. We are also listed as co-authors on this, again along with Doniger. Have we engaged? A draft allegedly will be distributed August 13.
- b. Does a preliminary draft exist? If so, critique it.

5. Technology (RG, JS)

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11. A study of the EU bubble and the advantage it gives them.

Tasks To be done

Optimal path
peaking in 2010-2020

~~100%~~

LDC formula

Incidence

Joe Aldy

EEI

Match soc. sec. weds with carbon revs. path over time -
2.23% payroll tax

compute revs
from somebody's
forecasted path

Figure out $2 \times 2 \times 2$ or $3 \times 3 \times 3$ model

Jay S

Randy L 400s

Joe Aldy 5-fabs

reqv. assets CNI/24h

IRA

Brown interns
of Ruid & Caml

Manly
& ind.

Samh
Caml

Soc Sec

Office of Economic Policy

FAX

Date:

*Aug 6, 1997*Number of pages including cover sheet: *8*

	Name	FAX Number	Phone Number
To:	<i>Jeff Frankel</i>	<i>395-6947</i>	<i>395-5046</i>
From:	<i>Doris Wilcox</i>	202-622-2633	622-2200

REMARKS:

☐

Urgent

☐

For your review

☐

Reply ASAP

☐

Please comment

395-
COI-
D one by 3:15

8/1

CLIMATE CHANGE POLICY ANALYSIS

(Lead authors indicated in parentheses)

1. Domestic Emissions Trading (Gardiner, Gruber)

Revised paper to be distributed Aug. 4. Includes analysis of auctions (FCC, other experiences) and administrative issues. → need new stuff w/ trading in

-WTO/MAI issues (Haverkamp)

Paper due Aug. 8

-Relationship to international trading (Simon)

Draft being circulated for comment.

2. International Emissions Trading and Joint Implementation (Doniger, Gruber)

Revised int'l emissions trading paper to be distributed Aug. 13. Will include additional analysis of institutional and compliance/monitoring issues.

-joint implementation/additionality (Doniger, Gruber) DOE

Paper due Aug. 13

-payment/trade account questions (Hunker, Shogren)

Paper due Aug. 13

-WTO/MAI issues (Haverkamp)

Paper due Aug. 8

3. Technology (Glauthier/Bierbaum)

Sectoral paper distributed. Paper setting forth major policy options to be developed in August. (First draft Aug. 13). President's Committee of Advisers on Science and Technology (PCAST) and DoE Labs preparing reports to the President for October 1 delivery.

4. Developing country commitments (Pomerance, Hunker)

Paper setting forth policy options due Aug. 13

-escape clause (Pomerance, Gruber)

Paper due Aug. 8

-competitiveness/trade issues (Orszag)

Paper drafted.

5. Federal undertakings (Goodman, Glauthier)

Paper setting forth major policy options due Aug. 22. (First draft Aug. 13).

lots of ways to do this - could
negotiate country commitments if
compulsory loan

overview

new if
would
work

Shogren
Europe
paper

only need
w/

Background → Not appropriate
discussion

can make by
w/ day

what should their
commitment be? would
we live up to that
what is trigger?
not in draft

**Climate Change Working Groups
Core Members
July 14, 1997**

I. Domestic emissions trading

1. EPA (Gardiner and Doniger)
2. Treasury (Wilcox and Gruber)
3. OMB (Minarik)
4. CEA (Shogren)

II. Developing country commitments

1. State (Pomerance)
2. AID (Hales)
3. Treasury (Geithner)
4. Commerce (Hunker)
5. WH Task Force (Forrister)

III. International emissions trading and joint implementation

1. State (Pomerance)
2. AID (Hales)
3. Justice (Simon)
4. CEA (Frankel)
5. OMB (Gotbaum)
6. DOE (Reicher)
7. Commerce (Hunker)
8. WH Task Force (Forrister)

IV. Technology programs

1. OMB (Glauthier)
2. DoE (Reicher and Romm)
3. OSTP (Henry Kelly and Rosina Bierbaum)
4. EPA (Gardiner and Doniger)
5. Treasury (Gillingham)
6. CEA (Frankel)
7. DoT (Kruesi)
8. USDA (Rawls)
9. Commerce (Hunker, Good)

V. Regulations and Standards

1. OMB (Glauthier)
2. EPA (Gardiner and Doniger)
3. DoE (Reicher and Romm)
4. Treasury (Gruber)

VI. Transition Assistance

1. Labor (Montgomery)
2. EPA (Gardiner)
3. NEC (Robyn)

CC: [illegible]

DW
TIA

OFFICE OF THE LEGAL ADVISER
UNITED STATES DEPARTMENT OF STATE



TELEFAX COVER SHEET

Mr. John Gruber - phone 622-0563 - fax 622-2633

TO: Col. Roy Saloman - phone (703) 604-1628 - fax (703) 607-3124

FROM: Mr. Robert K. Harris & Sue Biniaz
Telefax Number: (202) 736-7115
Telephone Number: (202) 647-1370

DATE: 8/5/97

SUBJECT: Climate Change: Clearance/Comments on Paper on Escape Clause

Number of Pages Including This Cover Page: 4

Message: In the interagency process on Climate Change, State is tasked with presenting a paper on August 8 on the issue of "escape clauses". Attached is a draft, for your clearance and/or comments. Please give us any thoughts by COB, Wednesday, August 6. Thanks.

DRAFT

Climate Change: "Escape Clause"

Issue

Whether, in the current negotiations on a follow-on protocol/other legal instrument, the United States should press for an "escape clause" whereby a Party would be discharged from its legal obligation to meet an emissions target if certain conditions existed.

Background

- o Concerns have been raised concerning a future scenario under which the United States would be legally bound to a particular emissions limitation/reduction target even if achievement of the target would cause harm to U.S. competitiveness or national security.
- o There appear to be a number of ways in which such a scenario could potentially be addressed, not all of which are mutually exclusive, e.g.,
 - Agreeing to a non-legally binding, rather than legally binding, target.
 - Agreeing to a binding target at a level that is not likely to result in the above scenario.
 - Agreeing to a binding target, with substantial flexibility in terms of implementation (through, for example, multi-year targets, emissions trading, legal "borrowing" of emissions allowances from future budget periods).
 - Ensuring that the agreement allows for withdrawal upon reasonably short notice. The Climate Change Convention requires three years' notice; an amendment to the Convention would be covered by this requirement. A protocol could vary the notice requirement, for example, by allowing withdrawal upon one year's notice.
 - Having the agreement provide for discharge of the legal obligation to meet a target upon certain conditions; unlike withdrawal, such a clause would allow a country to remain a Party to the agreement.

This paper focuses on the last approach.

DRAFT

-2-

Discussion

- o Apart from policy issues (see below), devising a clause providing for the discharge of the legal obligation to meet a target raises a number of legal questions:
 - What would the substantive condition(s) be that would trigger the discharge of obligation (for example, harm to national security)?
 - o Given the U.S. position that the agreement should dictate the target but not the policies/measures to achieve it, how would one deal with the situation in which the target itself is not necessarily the cause of the condition, but the particular Party's chosen method(s) of implementation?
 - Who would decide whether the substantive condition(s) had been met, i.e., would it be self-judging (by the Party in question) or would it be the subject of a decision by other Parties to the agreement or a third party? If the latter, what kind of institution would decide?
 - What would the temporal aspects be: in the case of a multi-year target, when could a Party invoke the clause? in the case of more than one budget period, what would the Party's obligation be with respect to subsequent budget periods?
 - What would be the relationship between the international "escape" clause and the domestic legislation necessary to implement the target (e.g., how would the domestic regime reflect the international clause)?
- o Policy considerations in connection with a possible "escape" clause include, e.g.,
 - likely domestic reaction (Senate, industry, environmental NGOs);
 - likely international reaction;
 - likelihood of being able to negotiate such a clause;
 - likelihood of "escape" clauses being demanded by other countries (for example, by developing countries seeking to subject their environmental obligations to their need for economic development and/or the receipt of financial and technical assistance);
 - in the case of a clause excusing environmental performance based on harm to the economy, extent of its consistency with the U.S. conception of and worldwide goals regarding "sustainable development."

Elaborate points

call w/ox

US interests of ec. comm
d. cons. the board REPRESENT

Dom em

Mod EPA
w + ox

OMB
CE + Shapiro

LDCs

STATE
AID H.
Trans. Geithner
commerce
WRTS

replay

Inte tradg + JZ

Frankel

Techn.

pgms.

Frankel

trans. assistance
Req. + STAG.

aug. 7, 1997

GCC

Items to bring up in principals/principles meeting

Targets and timetables:

Develop evidence against radical options:

- Optimal path for 2100 concentration targets (from Manne-Richels, G-cubed?...)
- Cost benefit ratio for "1990 levels by 2010" (from Nordhaus?)
- Analogy with 1970s oil shocks
- Other

Formulate language for possible moderate option in treaty, e.g., "eliminate emissions growth by 2010-2020, and reduce below 1990 levels by a later date."

level of emissions

Formulate possible language for an escape clause, e.g., setting a ceiling on price of carbon

The dangers of Wishful Thinking (high AEEI)

- Critique 5-labs study
- Historical relationship between price and EEI

L.S.: Diff. in implic. for 2070 temp
(1) from nothing
• 1990 by 2010

L.S. (3) Analyze alt. regime.
escape clause

Implementation

(4) Techn study Trans.-CEA
include OMB (Gutbaum) & Comm.

(3) Global carbon price
at fixed price per ton

Do not wait until we have a treaty (or until negotiations break down) to spell out domestic implementation (e.g., tradable permits). Reasons:

- internal deliberations: it is good to face the implications before making an int. commitment
- public dynamics: although the result would be a controversial national debate,
 - that debate has to take place anyway
 - announcing the measures and having the debate early would deflate pressure from both environmentalists and r.o.w., thereby allowing US to hold more reasonable positions in Kyoto.

An argument against grandfathering emissions permits: the incidence doesn't fall entirely, or even primarily, on the coal and oil companies where the permit requirements would (most efficiently) be imposed. We should estimate where incidence does fall.

Should revenues be used to finance entitlements in 21st century? There is a lock-in argument in favor. We should compute likely amount and path of revenue.

International dimension

Formulate proposal for serious LDC participation (making "evolution" more concrete, while recognizing that there may in fact be no common ground between Congress and rest of world): e.g., a formula that specifies emissions requirements as a function of GDP/capita.

Elm. Energy Subsidio

Principles for Climate Change Policy

We should pursue policies that have integrity. It is important to have credible goals, for which the costs and benefits are prudently forecast.

It is more important to begin in a successful way than to get the parameters exactly right. Loose targets that are ratifiable and achievable are more important than tight targets that cannot be accomplished in the short run.

We must pursue strategies that have a reasonable prospect of ratification. Meeting the criteria of either the international or domestic communities alone is not sufficient.

To maintain the above principles, any solution must meet four criteria:

- Equitably proportioned reductions from a plausible future baseline (eg. 2010).
- It should involve fluctuations in energy prices that are within our historical range of experience.
- Developing countries must eliminate subsidies to carbon consumption
- Domestic credit for reductions abroad, through Joint Implementation projects, must depend on credibly demonstrated reductions in emissions from a plausible baseline.

aug. 7, 1997

GCC

Items to bring up in principals/principles meeting with Treasury

Targets and timetables:

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