July 27, 2001

Friday

July 2001

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

BOB K. - LEAVE

7 am

BLOCKED

8 00

9 00

10 00

10:47am-11:02am Welcome to Calendar!

11 00

12 pm

1 00

2 00

3 00

4 00

5 00

6 00

TaskPad

TaskPad

Get the most out of Outlook 98

Notes

27568

July 30, 2001

Monday

July 2001

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

7 am

8 00

9 00

10 00

DOE's concerns re National Pipeline Mapping System/Stacey Gerard, Office of Pipeline S

11 00

12 pm

1 00

2 00

Mtg. w/Rudins, Dough Carter and Bob Caine on Sequestration demostration (Bob's offic

3 00

4 00

5 00

6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27569

July 31, 2001

Tuesday

July 2001

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

7 am

8 00

9 00

10 00

11 00

12 pm

1 00 1:10pm Van will be ready for Rayburn Bldg/Escalators on G level (confirmed by Lee on

FY 2002 Conference Issues Briefing/Loretta Beaumont, Kolevar, Sheets (Rayburn B-308)

2 00

3 00

4 00

5 00

6 00

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27570

August 01, 2001

Wednesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am	
8 00	
9 00	
10 00	
11 00	
12 pm	
1 00	Dave Garman, ASEE/Alaska Clean Coal Project
2 00	IGCC/Linda Stuntz; James Sevinsky; Joel Chalfin, GE; Matthew Tanzer
3 00	Pre-brief/SPR mtg. on 8/2-Furiga, cast of 1000s
4 00	
5 00	
6 00	

TaskPad

- [x] TaskPad
- [ ] Get the most out of Outlook 98

Notes

DOE039-0139 4/5/02 27571

August 02, 2001

Thursday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am	
8 00	Mike Jacobs/Speech prep for Houston trip
9 00	
	Chris Freitas
10 00	Nancy Johnson
11 00	Follow-up on 7/13 ltr from Jim Houck-Energy Strategy/Jeff Seabright, Texaco; Bill Bresn
12 pm	
1 00	
2 00	SPR Organization, Performance Measures & Oppt. for Improvement/DepSec, Furiga, cast of 1000s (7B-252, DepSec conf rm)
3 00	
4 00	
5 00	
6 00	

TaskPad

- [x] TaskPad
- [ ] Get the most out of Outlook 98
- [ ]

Notes

27572

August 03, 2001

Friday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

RESCHEDULE/Operational Program Reviews/Braitsch, Roy

7 am

8 00

9 00

Briefing re Mickey Leland events/Faith Cline, Dottie Fowlkes

10 00

Janet Sena, TECO Energy Inc, Tampa, FL/Intro meeting

11 00

11:50am Car-escalator-1000 Water St.

12 pm Charles Fritts,AGA & Charlie Estes (LeRivage)

1 00 1:05pm Car-return to DOE

2 00

3 00

BLOCK-BOB K. OUT

4 00

5 00

6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27573

August 06, 2001

Monday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

VVH-AWS

7 am

8 00 Alaska update/Juckett, Tomaszewski

9 00

10 00

11 00

12 pm

1 00 Current Status of Jacksonville Electric Project & Intro mtg./Frank Kelleher, Tracy Danese

2 00

3 00

4 00

5 00

6 00

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27574

August 07, 2001

Tuesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

BOB K. - NETL-MORGANTOWN

7 am BLOCK-Morgantown

8 00

9 00

10 00

11 00

12 pm

1 00

2 00

3 00

4 00

5 00

6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27575

August 08, 2001

Wednesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

BOB K - Oil & Gas Strategic Review/Denver, CO (1-5pm)

7 am BLOCK - Bob in Denver

8 00

9 00

10 00

11 00

12 pm

1 00

2 00

3 00

4 00

5 00

6 00

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27576

August 09, 2001

Thursday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

9 00

10 00

11 00

12 pm

1 00 Mickey Leland Luncheon/Awards Ceremony (1E-245)

2 00

3 00 Critical Infrastructure Policy (CIP)/Paula Scalingi, Ira Stern

4 00 TAPING/Energy Standards Board (GE-098)

5 00 5:15pm-6:15pm Clean Coal Power Initiative Strategy & Investment Strategy/Bruce Carnes, Walter Howes, David Berg, Andy Paterson (4A-253)

6 00

6:30am - 7:00am When Bob arrive, call George Rudins immediately.He has what Bob needs to start the meeting.

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27577

August 10, 2001

Friday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

9 00 Mickey Leland Closing Session (6E-069)

10 00

11 00

12 pm

1 00 BRENT/farewell (4G-084 conference room)

2 00 2:00pm-2:45pm Interview/Mary Ann Lavelle, US News & World News-Clean Coal (Drew Malcomb)

3 00

4 00

5 00

6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27578

August 13, 2001

Monday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

BOB K.-PITTSBURGH (Public Hearing)
V. Vinson-Hatcher/Leave

7 am BLOCK - Bob in Pittsburgh

8 00

9 00

10 00

11 00

12 pm

1 00

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3 00

4 00

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6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27579

August 14, 2001

Tuesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

BOB K. -Oil & Gas Strategic Review/Houston, TX
V. Vinson-Hatcher/Leave

7 am BLOCK - Bob in Houston, TX

8 00

9 00

10 00

11 00

12 pm

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6 00

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27580

August 15, 2001

Wednesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am — BLOCK - BOB K. OUT

8 00

9 00

10 00

11 00 — Clean Coal mtg w/DepSec Card (7A-219)

12 pm

1 00

2 00

3 00

4 00 — Dana Marshall of Verner Liipfert/LNG Imports & Energy Strategies

5 00

6 00

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27581

August 16, 2001

Thursday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

Interview/Houston Chronicle-David Ivanovich-Clean Coal (Drew Malcomb)

9 00

Intro meeting/Dr. Ron York, new COO, AADC, Jeff Miles

CCPI Program Plan/Kevin Kolevar

10 00

Fuel Cells, general Honeywell activities/Maxine Savitz

10:30am-5:30am BLOCK - NO MORE APPOINTMENTS

11 00

12 pm

1 00

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6 00

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27582

August 17, 2001

Friday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

9 00

10 00

11 00

12 pm

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6 00

12:00am - 5:30am BLOCK - NO MORE APPOINTMENTS

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

DOE039-0151

4/5/02

27583

August 20, 2001

Monday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

VVH-AWS

7 am
8 00
9 00
10 00
11 00
12 pm
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TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27584

August 21, 2001

Tuesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

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11 00

12 pm

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TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27585

August 22, 2001

Wednesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

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12 pm

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TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

DOE039-0154

4/5/02

27586

August 23, 2001

Thursday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

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12 pm

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TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27587

August 24, 2001

Friday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

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12 pm

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6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27588

August 27, 2001

Monday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am
8 00
9 00
10 00
11 00
12 pm
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3 00
4 00
5 00
6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

DOE039-0157

4/5/02

27589

August 28, 2001

Tuesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

9 00

10 00

11 00

12 pm

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6 00

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27590

August 29, 2001

Wednesday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am
8 00
9 00
10 00
11 00
12 pm
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3 00
4 00
5 00
6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27591

August 30, 2001

Thursday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

9 00

10 00

11 00

12 pm

1 00

2 00

3 00

4 00

5 00

6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27592

August 31, 2001

Friday

August 2001

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

7 am

8 00

9 00

10 00

11 00

12 pm

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2 00

3 00

4 00

5 00

6 00

TaskPad

- [x] TaskPad
- [ ] Get the most out of Outlook 98
- [ ]

Notes

27593

September 04, 2001

Tuesday

September 2001

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October 2001

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

VVH-AWS

7 am BLOCK-BOB'S 1st DAY BACK

8 00

9 00

10 00

11 00

12 pm

1 00

2 00 Pre-brief on Procurement mtg. on 9-6/John Shages

3 00

4 00

5 00

6 00

TaskPad

- [x] TaskPad
- [x] Get the most out of Outlook 98
- [x]

Notes

27594

September 05, 2001

Wednesday

September 2001

S	M	T	W	T	F	S
						1
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October 2001

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V. Vinson-Hatcher/Leave

7 am	
8 00	
9 00	David Webb & Kyle Simpson, Gas Technology Institute
10 00	
11 00	
12 pm	
1 00	Technology Transfer to Independence across America/Don Duttlinger,PTTC
2 00	2:00pm-2:15pm Mtg. w/Mike on upcoming speeches (Bob's office)
3 00	iNTERVIEW W/DREW MALCOMB (BOB'S OFFICE)
4 00	
5 00	
6 00	

TaskPad

- [x] TaskPad
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Notes

5(4)

27595

September 06, 2001

Thursday

September 2001

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October 2001

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7 am

8 00 Various Issues/Charlie Smith/Off. of Vice President

9 00

10 00

11 00

12 pm

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TaskPad

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Notes

DOE039-0164

4/5/02

27596

September 07, 2001

Friday

September 2001

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October 2001

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BLOCK - BOB K.

7 am
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12 pm
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Notes

27597

September 10, 2001

Monday

September 2001

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October 2001

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7 am BLOCK

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TaskPad

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Notes

DOE039-0166 4/5/02 27598

September 11, 2001

Tuesday

September 2001

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October 2001

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7 am BLOCK

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12 pm

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TaskPad

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- Get the most out of Outlook 98

Notes

27599

September 12, 2001

Wednesday

September 2001

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October 2001

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7 am BLOCK

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12 pm

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TaskPad

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Notes

27600

September 13, 2001

Thursday

September 2001

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October 2001

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7 am BLOCK

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12 pm

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TaskPad

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Notes

27601

September 14, 2001

Friday

September 2001

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October 2001

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7 am BLOCK

8 00

9 00

10 00

11 00

12 pm

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6 00

TaskPad

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Notes

27602

September 17, 2001

Monday

September 2001

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October 2001

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28	29	30	31			

BOB K. - OUT ALL DAY
VVH-AWS

7 am BOB K. - OUT

8 00

9 00

10 00

11 00

12 pm

1 00

2 00

3 00

4 00

5 00

6 00

TaskPad

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- Get the most out of Outlook 98

Notes

27603

September 18, 2001

Tuesday

September 2001

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October 2001

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28	29	30	31			

7 am

8 00

9 00

10 00

11 00

Updated: Procurement Mtg (US Conf Room, 7A-219)

12 pm

1 00 Taping-GISB Taping for Houston event (GE-098)

2 00

3 00 Visit by American Assoc. of American State Geologists-Edie Allison

4 00 Advisory Boards/Porter, Rudins, DeHoratiis

5 00

6 00

TaskPad

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Notes

DOE039-0172 4/5/02 27604

September 19, 2001

Wednesday

September 2001

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October 2001

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21	22	23	24	25	26	27
28	29	30	31			

7 am

8 00

9 00

10 00

11 00

David Webb, Gas Technology Institute, Kyle Simpson/follow-up meeting from 9/5.

12 pm

1 00 Fuel Cells/Bob Card, Frank Blake, Garman, Vic Der (7A-219)

2 00

3 00

4 00

5 00

6 00

TaskPad

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Notes

b(2)

27605

September 20, 2001

Thursday

September 2001

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October 2001

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21	22	23	24	25	26	27
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BOB K. - LEAVE AFTER @ 12 NOON

7 am

8 00

9 00

10 00 Clean Coal, Advisory Committees, Grants, etc/Bob Card, Rita Bajura (7A-219)

11 00 Draft Testimony (4G-084 Conference Room)

12 pm BLOCK - BOB OUT

1 00

2 00

3 00

4 00

5 00

6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

DOE039-0174 4/5/02

27606

September 21, 2001

friday

September 2001

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October 2001

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BLOCK-BOB K. OUT

7 am BLOCK - BOB K. OUT

8 00

9 00

10 00

11 00

12 pm

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6 00

TaskPad

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Notes

27607

September 24, 2001

Monday

September 2001

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October 2001

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BOB K. - NORTH AMERICAN GAS SYMPOSIUM-HOUSTON, TX

7 am BLOCK

8 00

9 00

10 00

11 00

12 pm

1 00

2 00

3 00 ESE Meeting (Rick Furiga will attend) (7A-219)

4 00

5 00

6 00

TaskPad

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- Get the most out of Outlook 98

Notes

27608

September 25, 2001

Tuesday

September 2001

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October 2001

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RESCHEDULE/Tampa Clean Coal Project/Jimmy Glotfelty, D. Carter, G. Rudins (4G-084 cor

7 am

8 00

9 00

PPII Conference Call/Bajura, Carabetta, Rudins (Bob's office)

10 00

11 00

12 pm

1 00 Clean Coal/Robert Do, Pres; Dennis Miller, VP; Global Plasma Systems Group (3F-034)

2 00

Budget 2003 Evaluation/DAS & R&D Folks

3 00

BLOCK

4 00

5 00

6 00

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Notes

27609

September 26, 2001

Vednesday

September 2001

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October 2001

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VVH - IN @ 11am

7 am

8 00

9 00

10 00

11 00

12 pm George Furmich

1 00 BLOCK

2 00 Discuss Testimony for Oct. 2/Juckett, Ellett, Murphy, CI folks

3 00

4 00

5 00

6 00

TaskPad

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Notes

27610

September 27, 2001

Thursday

September 2001

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October 2001

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RESCHEDULE/Fuel Cells/Maxine Savage, Barry Johnson (Honeywell)
VVH - FUNERAL (leaving @ 9:45a)

7 am

8 00

9 00 SPR (DS Conf. Rm.)

10 00

11 00

12 pm

1 00 BLOCK

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TaskPad

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Notes

27611

September 28, 2001

Friday

September 2001

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October 2001

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28	29	30	31			

BOB K.-CCPI Workshop/Hyatt Hotel @ Pittsburgh Airport
GUIDO DEHORATIIS ACTING AS
Rick Furiga-LEAVE

7 am BOB K. - PITTSBURGH

8 00

9 00

10 00

11 00

12 pm

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4 00

5 00

6 00

TaskPad

- TaskPad
- Get the most out of Outlook 98

Notes

27612

DOS: (b)(6)

JAMES T. SIMS

Phone: (b)(6) fax:

PROFILE

Dynamic and innovative marketing / communications professional with 20+ years experience in managing communications, media relations, coalition development and marketing / advocacy campaigns in the public and private sectors. Experienced political operative at both the federal and state levels. Effective manager / team leader and former Chief of Staff to a U.S. Senator. A technologically savvy and creative problem solver with an energetic "can do" attitude and exceptional communications, interpersonal and leadership skills.

EXPERIENCE

President WinCapitol, Inc., Washington, D.C. 1992-Present

- Co-founder of this public affairs/grassroots advocacy firm specializing in helping companies and associations market their message and public policy positions to government, business and community leaders.
- Helped save a Fortune 100 client's multi-million-dollar investment with creative marketing / advocacy that won recognition in a page 1 New York Times story ("How A Fierce Backlash Saved The 'Made in USA' Label," NYT, 12/6/97).
- Helped devise and manage an innovative national marketing/advocacy campaign that was hailed by United Press International as having "raised the heights of Washington lobbying."
- Produced and co-hosted the first live internet webcast from the U.S. House of Representatives' annual Renewable Energy Expo.
- Successfully represented such leading U.S. corporations as The Dow Chemical Company; Premark International, Inc.; Danaher Corporation; Calpine Corporation; Geothermal Resources Association; ESI Energy, Inc.; Constellation Energy, Inc.; Oxbow Power Company; Magma Power Company; Take Pride in America Coalition; Made in USA Coalition; and the United States Olympic Committee.

Principal Murphy & Demory, Ltd., Washington, D.C. 1992

- Helped land one of the firm's primary corporate accounts while representing clients in the fields of energy, environment and high-technology communications.

Chief of Staff U.S. Senator Bob Kasten, Washington, D.C. 1989-1992

- Directed all political, legislative, marketing, media and budget operations for this U.S. Senator. Responsible for political and legislative strategy development, national and state political outreach, media relations, campaign marketing, fundraising and management of a staff of 60+ employees at eight offices.

EXPERIENCE (CONT.)

Press Secretary U.S. Sen. Bob Kasten, Washington, D.C. 1984-1989

Served as state and national news media spokesperson; drafted speeches, opinion-editorials, press releases and weekly newspaper columns; designed and published newsletters and other direct mail pieces; and wrote and produced live radio and television programs.

Deputy Press Secy. U.S. Sen. Roger Jepsen, Washington, D.C. 1981-1984

Similar duties as immediately above.

Caucus Assistant Iowa State Senate 1981

Assisted the Senate Majority Leader and Republican Caucus staff in conducting public relations programs for all Republican Senators.

Reporter/Copy Editor Register & Tribune, Des Moines, Iowa 1979-1981

Byline reporter and copy desk editor. Part-time while in college.

EDUCATION

1984, Georgetown University, Washington, D.C.

- B.A., Government/Public Affairs.
- Graduated Magna Cum Laude.
- Awarded the Georgetown University Club of Washington Prize For General Academic Excellence.
- Self-financed education.

SPECIAL SKILLS

- Accomplished public speaker, presenter and news media spokesperson.
- Expertise in cutting-edge PR / communications / marketing strategies.
- Experienced in managing outside services partnerships.
- Adept in the following:
  - Multimedia presentation authoring and delivery (Powerpoint, Astound, Director)
  - Interactive website design and live webcast broadcasting.
  - Video production and satellite interview programming.
  - Print/broadcast/electronic advertising design and placement.
  - Desktop publishing.
  - Software such as Word, Publisher, PowerPoint, FrontPage, Access, Dreamweaver, Fireworks, Acrobat, Photo Draw, Flash 4.0, Adobe Premiere, Real Publisher, Astound, Macromedia Director, Photo Editor, Image Composer, WinFax Pro, Quickbooks, PCAnywhere, Laplink, Timeslips and Norton Utilities, among others.

REFERENCES

Available upon request.

JAMES T. SIMS

Phone: (w)(h) Fax:

PROFILE

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- Co-founder of this public affairs/grassroots advocacy firm specializing in helping companies and associations market their message and public policy positions to government, business and community leaders.
- Helped save a Fortune 100 client's multi-million-dollar investment with creative marketing / advocacy that won recognition in a page 1 New York Times story ("How A Fierce Backlash Saved The 'Made in USA' Label," NYT, 12/6/97).
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- Successfully represented such leading U.S. corporations as The Dow Chemical Company; Premark International, Inc.; Danaher Corporation; Calpine Corporation; Geothermal Resources Association; ESI Energy, Inc.; Constellation Energy, Inc.; Oxbow Power Company; Magma Power Company; Take Pride in America Coalition; Made in USA Coalition; and the United States Olympic Committee.

Principal Murphy & Demory, Ltd., Washington, D.C. 1992

- Helped land one of the firm's primary corporate accounts while representing clients in the fields of energy, environment and high-technology communications.

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- Directed all political, legislative, marketing, media and budget operations for this U.S. Senator. Responsible for political and legislative strategy development, national and state political outreach, media relations, campaign marketing, fundraising and management of a staff of 60+ employees at eight offices.

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- B.A., Government/Public Affairs.
- Graduated Magna Cum Laude.
- Awarded the Georgetown University Club of Washington Prize For General Academic Excellence.
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- Expertise in cutting-edge PR / communications / marketing strategies.
- Experienced in managing outside services partnerships.
- Adept in the following:
  - Multimedia presentation authoring and delivery (Powerpoint, Astound, Director)
  - Interactive website design and live webcast broadcasting.
  - Video production and satellite interview programming.
  - Print/broadcast/electronic advertising design and placement.
  - Desktop publishing.
  - Software such as Word, Publisher, PowerPoint, FrontPage, Access, Dreamweaver, Fireworks, Acrobat, Photo Draw, Flash 4.0, Adobe Premiere, Real Publisher, Astound, Macromedia Director, Photo Editor, Image Composer, WinFax Pro, Quickbooks, PCAnywhere, Laplink, Timeslips and Norton Utilities, among others.

REFERENCES

Available upon request.

TEXACO INC.

2001-002586 Jan 31 A 9:47

PETER I. BIJUR
CHAIRMAN OF THE BOARD
& CHIEF EXECUTIVE OFFICER

2000 WESTCHESTER AVENUE
WHITE PLAINS, N.Y. 10650

January 20, 2001

Vice President Richard B. Cheney
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500

Dear Mr. Vice President:

As you assume the responsibilities of office, I want to share with you some thoughts on an issue I know is of vital concern to you and the President: national energy policy.

During the campaign, both you and President Bush correctly focused on the critical need for a coherent, forward-looking national energy policy. I could not agree more. One of the key challenges in crafting a more effective national energy strategy is greater policy coherence in Washington. Clearly, one of the shortcomings of the previous Administration was lack of coordination among federal agencies.

A truly national energy policy must engage the efforts of many agencies in a common purpose, including the Department of Energy, Department of Interior, Environmental Protection Agency, Department of the Treasury, and others. We cannot have an energy policy at DOE, a lands policy at DOI, an environmental policy at EPA. We need an integrated and comprehensive national energy policy that meets the needs of all Americans for affordable, clean, and reliable energy.

An issue as complex and far-reaching as energy will certainly require leadership from the White House. For this reason, I urge you and your colleagues in the Administration to conduct an early and comprehensive inter-agency review of national energy policy.

As you know better than most, previous incoming Administrations have conducted such reviews on critical issues. It is my hope that you will afford national energy policy a similar high-level review with White House oversight to lay a solid foundation for success in this Administration on this vital issue.

Sincerely,

PIB:bjt

cc: Secretary Designee Spencer Abraham
Secretary Designee Paul H. O'Neill
Secretary Designee Christine Todd Whitman
Secretary Designee Gale Norton

27616

2001-002126 Jan 26 p 3:51

5550 N. Braeswood Blvd., Suite 129
Houston, TX 77096 713/721-0537

VAN SAHAKIAN *

VAN SAHAKIAN is a graduate of Boston University and holds CPA certificates in Texas and Louisiana. He has been on the management staff of Price Waterhouse and has practiced on his own account. His management experience includes Chief Executive Officer of a national multi-corporate manufacturing company, Vice President and Chief Financial Officer of three publicly-held corporations, including a 32 corporation conglomerate, and Vice President and Chief Financial Officer of an independent oil company involved in drilling and ancillary activities. He has served on Boards of Directors and Executive Committees and was, for many years, listed in Who's Who in Finance and Industry.

January 22, 2001

The Honorable Spencer Abraham, Secretary
Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Mr. Secretary:

A PLAN: TO ESTABLISH A SYNFUELS INDUSTRY

As a concerned citizen with an interest in energy policy, particularly with regard to synfuels development I have been troubled, over the years, by a national energy policy that seemingly ignores the development of synfuels. Unquestionably, synfuels can be a significant contributor to future energy needs, but there seems to be a pervasive climate of negative thought regarding the viability of a synfuels development program, undoubtedly reinforced by the easy availability of foreign oil. Environmental concerns about clean air, the increasing rate of crude oil imports, etc. surprisingly has not stimulated a renewed interest in the development of alternate fuels. The absence of an aggressive and innovative government program, similar to the effort that produced synthetic rubber has been puzzling to me and it seems that the major obstacle to synfuels development is financial rather than the lack of technology. Considering the significant importance synfuel development would bring to the economy, the federal government should assume the responsibility to initiate an innovative and acceptable financial program for the development of synfuels as it did in the development of synthetic rubber.

The following discussion outlines a proven financial program which could free the capability of private industry to proceed in the development of alternate energy sources; you might find the program interesting and workable and indeed worth pursuing. Although the following outline of a financial program for synfuels development is necessarily over-simplified, it might be sufficiently described to suggest the possibilities of an innovative program with all of the benefits of oil and gas exploration investment but with substantially higher success expectations. The program addresses the problems of (1) where is the money to come from, (2) how can synfuel with its cost uncertainties compete with the world price of oil controlled by a cartel, and (3) the public apprehensions that the government, i.e. the taxpayer, will be fleeced somewhere in the process.

At one time I was described as an expert in steamship subsidies during my tenure with Price Waterhouse. My later experience in working as a financial officer in the oil and gas industry suggests to me that the principles of steamship operating-differential subsidies could work in the development of alternate fuel sources with the same remarkable success it achieved in building and maintaining an American Merchant Marine, through private industry. The problems of the American Merchant Marine paralleled those of synfuel development because it was impossible for American flag vessels to compete with the enormous cost-competitive advantage of foreign flag vessels. The provisions of operating-differential subsidies, as embodied in the Merchant Marine Act of 1936, and unlike typical

E-Mail: vansan@hal-pc.org FAX 713/721-0537

subsidies, provide for recapture which I suspect will tend to satisfy conservative political philosophy and mitigate the public apprehensions of unjust enrichment of business at government expense.

Operating-differential subsidies could provide a financial capability for synfuel development by making possible competitive parity with the world price of oil. Operating-differential subsidies do not reward inefficiency because they do not work on a cost-plus principle and tend to obviate the disadvantages inherent in purchase price guarantees and other such programs.

Operating-differential subsidies are contracted for long periods of time, typically 10 years, and the amounts subject to recapture are not determined year by year but cumulatively over the contract period and are based on a formula for net income. By this technique, subsidies may be large in the early years but as efficiency and profitability improve in later years, previously granted subsidies are subject to recapture based upon profitability, as defined. As an example, one of my former clients (the largest in the industry) had large subsidy grants in the early years of their subsidy contract, but by the time the 10 years had passed the government had recaptured 100% of all subsidies previously granted. Moreover, any subsidies not recaptured are included in net income and are fully taxable as ordinary income.

Operating-differential subsidies also include construction subsidies but if an energy company producing synfuels was guaranteed the capability of competing with the world price of oil through operating-differential subsidies, it would seem that the problem of plant construction financing through the private sector would be materially eased thereby relieving the government, or markedly reducing demands against the government, from granting direct loans or loan guarantees. It would also make it possible for smaller companies through joint ventures to become involved in synfuel development and thereby dilute the concentration of this activity generally in the hands of giant companies. This is an important factor because it not only spreads the opportunity to participate in what may become a major industry but also because traditionally in the U.S. it has been the smaller companies that have been the innovators and doers.

The machinery for steamship operating-differential subsidies has been in existence since 1936 and much precedent and experience has been established over the years; the program could be readily modified to apply to synfuel development. The mere production of liquified coal or shale oil could materially reduce America's dependence on foreign oil and the consequential benefits to the economy would be far-reaching. A significant factor of synfuel subsidies patterned after maritime subsidies is that the development process and control would remain entirely in the hands of private industry subject to the constraints and rewards of any other business venture. It is a practical and workable program, which will ultimately cost far less than programs that have been discussed from time to time, require little or no government interference, and would be self-eliminating when no longer needed.

I urge you to seriously consider the program outlined above..... when you can find a spare moment in your undoubtedly busy schedule; I would welcome your comments and opinion.

Very truly Yours,

cc: The Honorable Dick Cheney
Vice President

27618

NEMA
Setting Standards for Excellence

MALCOLM E. O'HAGAN
President

January 22, 2001

The Honorable Spencer Abraham
Secretary of Energy
U. S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Secretary Abraham:

Congratulations on your confirmation as Energy Secretary. I was hoping see you in person Friday afternoon at the Phoenix Park Hotel but was delayed.

I want to pledge NEMA's support to you as an information resource during these important times. A national energy policy is clearly called for and we stand ready to assist you in that regard. We have particular expertise in energy efficiency as our members produce lighting, electric motors and transformers. Our vice president of government affairs Tim Feldman has served on Secretary Richardson and O'Leary's Advisory Committee on Efficiency Standards.

NEMA is the leading association representing 475 companies that design, develop and manufacture products involved in the generation, transmission, distribution, control and end use of electricity. NEMA members employ 500,000 people in the United States and have annual revenues of $100 billion.

Again, my congratulations and best wishes for every success.

Sincerely,

Malcolm E. O'Hagan

National Electrical
Manufacturers Association

1300 North 17th Street, Suite 1847
Rosslyn, VA 22209
(703) 841-3271
FAX (703) 841-3371
mal_o'hagan @nema.org

From: "Tearse, Hal" <HTearse@DainRauscher.com> on 01/23/2001 03:38 PM GMT

To: "president@whitehouse.gov" <president@Whitehouse.GOV>
cc:
Subject: Energy policy

Instead of destroying the Arctic refuge I would suggest a comprehensive energy policy that would include:

Tax benefits for the continued exploration of oil and gas supplies

Tax Benefits for the continued and agressive development of alternative energy sources(ie: wind, solar etc)

A policy that will take in consideration the ever increasing energy needs of our country. The current crisis in California will be repeated in major population centers all over this country in the next ten years.

Now that you are President, perhaps you can really do something long term and important for all the people.

Lastly: Tax cuts are good for business, people and government. Lower taxes have always resulted in higher revenues for the government. So go ahead and lower taxes, alot. Have the courage to do what's right.

Good Luck.

Hal Tearse
Vice President-Investment Officer
Private Client Group
Minneapolis, MN 55402
612-371-2891 1-800-223-2724
Please note: We do not accept any buy or sell orders via the e-mail system.

2001-001995 Jan 25 P4:56

TIMMONS AND COMPANY, INC.
FAX COVER PAGE

To: The Honorable Spencer Abraham	From : Kathy Sanzaro
Company : Secretary of Energy	Company : Timmons and Co.
Fax Number : 202-586-4403	Fax Number : 202-822-9376

Subject : Appointment Request

Pages including cover page: 1 Date : 1/25/01 Time : 11:32:32

MESSAGE

Larry Harlow, President of Timmons and Company, Inc., would like to request a15 to 20 minute meeting for his clients, Red Cavaney, President and CEO of API (American Petroleum Institute) and Peter Bijur, Chairman of the Board and CEO, Texaco, Inc.

Mr. Cavaney and Mr. Bijur will be available for a meeting between 8:00am and Noon on February 8th and 9th and would like to discuss the Nation's energy policy for increasing oil and natural gas production. Mr. Cavaney and Mr. Bijur will be accompanied by Larry Harlow.

Please call me at 202-331-1760 to discuss the possibility of arranging a meeting with Secretary Abraham. Also, if I can provide additional information, please let me know. Thank you for your attention to this request.

Timmons and Company, Inc.
Suite 850
1850 K Street, N.W.
Washington, DC 20006
Phone: 202-331-1760

27621

From: Patrick Huddie <phuddie@enigmatec.com> on 01/29/2001 09:52 PM GMT

To: president@Whitehouse.GOV
cc:
Subject: National Energy Policy

The Honorable George W. Bush
President of the United States
The White House
1600 Pennsylvania Avenue, NW
Washington, DC 20500

Dear Mr. President:

The present energy crisis in California is a challenging matter for the second week of your presidency. This issue illustrates how important a rational energy policy is for the nation. Because California's government and special interests botched the transition to a free market the US Department of Energy has had to compel generating companies outside that state to sell power against their better judgment. Governor Davis and his legislative allies have resisted letting consumers pay the market price for their consumption patterns, and the result is a chronic shortage of supply and unrealistic expectations on the demand side. The role of price signals in changing producer and consumer behaviors was completely ignored.

My firm advises businesses in California, Maryland and elsewhere on energy strategy. It is clear to us that a predictable reliable supply is more important to business than a cheap supply, within reason. The impact of energy shortages in California shows how important energy is for the economy. A growing economy needs reliable power, especially in electricity hungry industries like semiconductor manufacturing and information services. One of our clients was asked to shut down and they lost production that cost several times more than the penalty they would have paid for staying open. Blacking out businesses to send employees home to protected residential neighborhoods on streets without traffic signals is absurd. I spent some time in Nigeria, where a generator was essential for every home because of incompetence and corruption at the power company in an major oil exporting nation! The USA does not need to have a third

world electricity system!

A rational energy policy would include coal, oil, gas and renewable energy sources, among which I count nuclear fission and fusion. Wind power and solar power are marginally useful, and good engineering can reduce consumption, but supply is king. At the same time the nation should not be so dependent on imported oil; recent advances in hydrogen fuel cells show the way to a future in which domestic oil is used for its highest value, petrochemicals and plastics, and electricity is generated efficiently where it is needed, be it in vehicles or at the workplace. The piece that is missing in that future is electricity to make the hydrogen fuel.

A nation with access to ample uranium and an effective moratorium against new nuclear power plants has its head in the sand. Recently the Calvert Cliffs nuclear plant in Maryland was inspected and re-licensed; its capital cost is fully amortized and Maryland will be able to rely on the safe Calvert Cliffs power plant for another 20 years. France relies on nuclear power for about 70% of its electricity. If the private sector can't build new nuclear plants with the confidence of the public, why not have the the Federal Government construct new plants on Federal land distant from cities and have the Department of Energy operate these plants safely?

The nuclear submarine and carrier fleets are the backbone of US naval power and the Navy seems to have the technical competence that reassures public opinion about carriers that home port in inhabited areas! In most cases government should not engage in a business activity if the private sector can do the job, but nuclear electricity generation seems to be one of those special cases in which the Federal government has unique abilities and assets that support the strategic position of the USA. I put it to you that ample domestic energy will reduce the need for this nation's armed forces to assume a posture for the defense of oil rich states that impacts other strategic priorities.

There are those who will say that radioactive waste is impossible to deal with, but they are wrong. The technology to embed waste in glass blocks is a reality; the waste does not leach out of glass and can be stored safely and indefinitely, or until we find a use for the rare isotopes in what we now call waste (I should declare that I own a few shares in Duratek, a company that pioneered this glass technology).

While there is certainly no one solution to the diverse energy needs of this economy, I urge you to explore all the immediate options with a critical eye, and to invest in energy research as if it really was a

national
priority. Mr. Alan Greenspan has identified energy as a key factor in economic growth. Energy is the key to prosperity and comfort, and there is
no reason for us to suffer energy crises inflicted by OPEC or excessive regulation. I believe that the ingenuity of this country is limitless, if
the free market can operate and the government regulates fairly. You have a
big job in front of you, and I wish you good luck.

Sincerely yours

Patrick Huddie

Dr. Patrick L. Huddie
Anderson, Huddie & Associates, LLC.
PO Box 825
Columbia, Maryland 21044-0825
<mailto:phuddie@enigmatec.com>
Phone (410) 923-0494 Fax (410) 923-4884

PGC®
Process Gas Consumers

1275 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2415
(202) 383-0444

January 26, 2001

2001-002182 Jan 29 A11:37

The Honorable E. Spencer Abraham
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. DC 20585

Dear Mr. Secretary:

We have written today to the President to express our desire to work with him and his Administration and the Congress in the development of a comprehensive national energy policy. A copy of that letter is enclosed.

We would very much appreciate the opportunity to meet with you and your Deputy Secretary early this year. We would like to discuss with you our views concerning national energy policy and the importance to American industry of the development of a policy and strategy that will assure delivery of natural gas and other energy to consumers at competitive and reasonable prices.

Sincerely,

Richard L. Fillman

Richard L. Fillman
Chairman

Enclosure

27625

PGC®
Process Gas Consumers

1275 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2415
(202) 383-0444

January 26, 2001

The Honorable George W. Bush
President
The White House

Dear Mr. President:

The Process Gas Consumers Group (PGC),[1] an association of industrial users of natural gas, looks forward to working with you and the new Administration on energy issues. Of utmost priority, PGC urges you and your Administration to develop and coordinate with the Congress a comprehensive national energy strategy and to take actions that will lead to the development of reliable supplies of natural gas and other energy at competitive and reasonable prices and to the development of adequate pipeline and other infrastructure to deliver those supplies to PGC members and other consumers.

PGC's members rely on natural gas as the necessary fuel for their manufacturing processes and, in some cases, as a raw material used in the manufacture of their final products. Since they must, and do, compete in the global economy, the recent upward spiral of natural gas prices has caused them significant hardship and, in some cases, has required production cutbacks. To ensure the future ability of energy-dependent companies to compete in their markets and to contribute fully to the nation's economic and social vitality, PGC believes that your Administration and the Congress should strive to bring greater stability to energy policy and give energy issues much more cohesive and forceful action.

The development of a thoughtful national energy policy is a large task involving issues on which a variety of views will be expressed. PGC recommends that you include three issues in this process. First, PGC believes that a national energy policy must optimize the nation's fuel choices, while also considering environmental goals. Although natural gas is an important fuel to meet energy and environmental goals, that fuel alone should not be the sole focus of the nation's future energy requirements for electric generation. Therefore, a national energy strategy and plan should include development of and a balance among as wide a variety of fuel sources as possible, including natural gas, coal, oil, hydropower, nuclear power, renewables and unconventional energy sources. Second, it is very important to revisit promptly current policies and restrictions that impede or prevent reasonable and environmentally-conscious oil and natural gas exploration and development, including offshore and on federal lands. Third, a national

[1] Members of PGC include: Alcan Aluminum Corporation, Alcoa Inc., Bethlehem Steel Corporation, Carpenter Technology Corporation, Corning Incorporated, Eaton Corporation, Farmland Industries, Inc., Ford Motor Company, General Motors Corporation, Grain Processing Corporation, Owens-Corning, Owens-Illinois, Inc., PCS Nitrogen, Inc., PPG Industries, Inc., The Procter & Gamble Co., and The Timken Company.

energy strategy should promote conservation of natural resources and energy and increased efficiency in the use of energy.

PGC looks forward to the opportunity to play a constructive role in development of a national energy policy and would be pleased to share its views on energy issues with you, your Administration and the Congress during the coming months.

Sincerely,

Richard L. Fillman

Richard L. Fillman
Chairman

cc: The Honorable E. Spencer Abraham
The Honorable Frank H. Murkowski
The Honorable W. J. (Billy) Tauzin
The Honorable Andrew H. Card

Houston Energy
Chamber of Commerce

P. O. Box 820228 Houston, Texas 77282 Tel 713/467-4732 Fax 281/497-4128 email dalestef@flash.net

January 29, 2001

The Honorable Spencer Abraham
Secretary of Energy
1000 Independence Ave
Washington, DC 20585

2001-002686 Jan 31 p 3:37

Dear Secretary of Energy Abraham:

This is the third letter to 30 of my elected representatives in Houston, Austin, and Washington. This time I have added 12 more elected and appointed officials that have a special relationship to the energy industry, but I do not vote for directly.

Enclosed is a reprint: Front Page News that was written July 1, 2000. Energy expenditures in the United States went up $90 billion between 1999 and 2000. Would you like to forewarn your constituents how much they should expect to pay for energy in 2001? 2010? Many constituents are concerned about their energy bills today and more so, tomorrow's energy bill.

Recently I was in Vienna (observer at OPEC meeting) and Paris (Met with IEA staff) to get a gut feeling for the energy situation. I am positive that energy will remain "front page news" for the foreseeable future.

The world energy situation/problem will remain in chaos until the consumer and producer has better energy data and a reliable energy model that is transparent for all parties.

My recommendation is that every political, corporate, and private entity should prepare a **Master Energy Plan** to prepare and survive in the future. It will be well worth the effort. California is a case example of what can happen without a plan.

The Houston Energy Chamber of Commerce stands ready to assist your political entity. Enclosed is a flyer on designing a **Master Energy Plan.**

Sincerely

Dale W. Steffes

Enclosures: AEE article
Flyer on Master Energy Plan

Designing and Implementing a

Master Energy Plan

For Energy Consumers, Energy Producers

ONE-DAY SEMINAR

LOCATIONS & DATES

Houston Hotel, Monthly, First Tuesday
(Minimum of 5 participants required)

In-House for individual company, country
By mutual agreement

ABOUT THE SEMINAR

This one-day seminar is to provide strategic planners and strategic forecasters with the process to design and implement a **Master Energy Plan** for their company or country.

The seminar provides participants a macro model of the world energy system that tracks dollars and BTU's.

ABOUT THE INSTRUCTOR

Dale W. Steffes is an independent consultant specializing on the management functions of strategic planning and strategic forecasting for companies and political entities dealing with the energy industry. He has over 30 years of professional experience assisting clients with their **Master Energy Plans**.

He is a Registered Professional Engineer; and a Certified Energy Manager. He has degrees in Mechanical Engineering, Business Administration and Theology.

He wrote an "Energy Outlook" regular column for the Journal of Commerce for seven years. He is a regular contributor to the Strategic Planning for Energy and Environment journal.

FEES

Regular Individual Fee	$ 995.00
WEMA Member Fee	$ 495.00
Private In-House Fee (Max 15)	$ 9,950.00

Plus travel expenses.

CONTACT

Planning & Forecasting Consultants
Box 820228, Houston, Texas 77282
Tel 713 467 4732 Fax 281 497 4128
Email: Dalestef

Seminar Outline

Management System
- Influences
- Issues

Forecasting Methodology
- Energy Models

Assumption Generator
- Natural Resources
- Geographical
- Economic
- Technology
- Social
- Political
- Ecological

Regions
- United States
- Mexico & Canada
- Latin America
- Western Europe
- E. Europe and FSU
- Japan
- China
- South Asia
- Southeast Asia & Oceania
- Africa
- Middle East

Major Industry Cost Centers
- Oil at Wellhead
- Natural Gas at Wellhead
- Coal at Minemouth
- Nuclear at Busbar
- Hydro at Busbar
- Crude Oil Pipelines
- Crude Oil Barges, Trucks, etc.
- Natural Gas Pipelines
- Railroad Coal Transport
- Petroleum Refineries
- Hydrocarbon Electric Generators
- Liquid Petroleum Pipelines
- Electric Transmission
- Gasoline Distribution
- Natural Gas Distribution
- Electric Distribution
- Energy Imports
- Energy Exports

Energy Consumer Sector Expenditure
- Transportation
- Industrial
- Commercial
- Residential

27629

The Dow Chemical Company
[illegible]
Washington, DC [illegible]
202 • 429-3400

January 29, 2001

2001-002368 1/29 P 5:27

The Honorable Spence Abraham
Secretary of Energy
Department of Energy
Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Abraham:

Congratulations on your cabinet appointment as Secretary of Energy.

We look forward to continuing to work with you and your staff as you address the nations growing energy concerns.

I am forwarding to you a note from Bill Jewell who is the Director for our energy business with some thoughts on energy policy for your consideration.

We would be happy to provide additional information if desired.

Regards,

Wilma Delaney

Wilma I. Delaney
Vice President

WID:tsj

Attachment

27630

Dow Hydrocarbons and Resources Inc.
P.O. Box 3387
Houston, Texas 77253-3387
400 West Sam Houston Pkwy. S
Houston, Texas 77042-1299

January 22, 2001

Bush/Cheney Transition Team - Energy
Washington, D.C.

VIA FAX

Thank you for the opportunity to provide input on the important and timely issue of energy policy. The Dow Chemical Company is a substantial consumer of natural gas, electricity and hydrocarbon feedstock. Your deliberations concerning the reliability and competitiveness of energy supplies have a tremendous impact on our company as well as the nation. Reliable and competitive sources of energy for our country are a requirement for sustainable economic growth. As you move forward in this debate, we would be grateful if you considered the following key points.

- The United States needs robust, diverse and competitive sources of energy. Dow believes that only a balanced energy supply that includes coal, oil, nuclear, natural gas, hydro, solar, wind, biomass and energy efficiency gains will yield reliable and competitively priced energy. Reliance on natural gas as The growth fuel for the nation is of doubtful prudence.

- Cogeneration of electricity and steam should be encouraged as a way of increasing reliable electric supply and improving efficiency. "Cogeneration parks" allow multiple adjacent consumers of energy (industrial as well as large private and public institutions) to combine electricity and steam demands to reach necessary economic thresholds. "Parks" also provide siting advantages for the community as well as reduce transmission and distribution requirements. This initiative would cause the shutdown of old less efficient boilers and help clean the air. The environment and competitiveness win.

Thanks again for the opportunity to provide input.

Very best regards,

R. W. Jewell
Business Director - Energy
713-978-3600

cc: M. Parker, CEO
W. Delaney, Vice President - Government Affairs

CAITHNESS ENERGY, L.L.C.

The Grace Building
1114 Avenue of the Americas
New York, New York 10036-7790

James D. Bishop
Chairman and CEO

2000-002650

Via Facsimile and Federal Express

January 30, 2001

The Honorable Spencer Abraham
Secretary of Energy
Attn: F. Chase Hutto III
US Department of Energy
1000 Independence Avenue S.W.
Washington, D.C. 20585

Dear Secretary Abraham:

I am writing at the suggestion of Susan and David Easlick as a result of their conversations with you and Chase Hutto at the recent inauguration.

I am the Chairman and Chief Executive Officer of Caithness Energy, LLC. Caithness has been in the electric generation business for over twenty years. We believe ourselves to be the largest renewable energy generator in the United States. In addition, we have significant ownership interests in gas fired combined cycle technology. Our renewable generation includes major holdings in geothermal, solar and wind including the worlds largest solar generating station.

Caithness' President and Chief Operating Officer, Les Gelber, was an active participant in the recent talks in Washington DC, hosted by Secretary Summers and Secretary Richardson, on the California energy crisis. Caithness is the largest contract supplier of energy to Southern California Edison. Caithness projects make up 25% of Southern California Edison's contracted power ("QF Power"). Caithness continues to be involved with the ongoing efforts in California to solve the crisis.

As the new administration begins to deal with the issues and challenges surrounding this country's energy policy, I believe we can bring a unique perspective to your deliberation. I would be honored to meet with you at your convenience to discuss these issues. I have enclosed a draft of our soon to be updated brochure.

Kind personal regards,

Sincerely,

James D. Bishop, Sr.

cc: Leslie J. Gelber
Susan and David Easlick

Telephone: (212) 921-9099 • Fax: (212) 921-9239

27632

From: "Michael S. Gordon" <msgordon@citrus.ucr.edu> on 01/30/2001 07:30 PM GMT

To: president@Whitehouse.GOV
cc:
Subject: Energy policy

Mr. President & the staff that reads these letters -

In writing this letter there are two things I realize: it is unlikely to be read, and if it is read it is unlikely to be taken seriously. Despite those two rather daunting thoughts the recent trends in the white house have me fraught with frustration and anxiety about the future of our country. So while I am confident of the null impact of my letter, I nonetheless feel compelled to vent my distresses about the current policy.

While I strongly disagree with the new policies on abortion overseas and the new social services agency devoted to faith-based organizations, those are issues that should be dealt with in the U.S. supreme court. Moreover they seem an inevitability of electing a conservative president.

The proposal to which I can not leave unchallenged is further exploration for fuel in our national parks to relieve the energy crisis and the re-opening of potentially substandard energy plants. There is bipartisan agreement that our reliance on foreign oil, and a horrendous deregulation policy in California have brought about this energy crisis. Clearly there needs to be a decisive and effective strategy to relieve this situation before California's losses endanger the rest of the country, and perhaps the world.

Drilling for more oil, however, will have two consequences - quick, temporary relief from the crisis and unalterable damage to our national parks. A quick means-end analysis suggests an ephemeral gain is not of equal value to a permanent loss. Restarting older, likely less efficient and highly pollutant power plants will contribute to our rapid consumption of fossil fuels, further exasperating an already tenuous situation.

Therefore I urge, with all the miniscule muscle that this letter flexes, that the president address this energy crisis by considering all the non fossil-fuel based sources of energy. California has a bevy of wind generators already in place, running far from capacity; solar energy panels, if manufactured quickly, could be added as a permanent supplement to our energy needs; instead of drilling offshore for oil a more permanent solution would be an offshore hydroelectric plant. Fossil fuels will be exhausted and the president's proposal only plunges us deeper into that addiction. I urge him to consider a broader approach to this problem, and to respect the wishes of the half of the country that agrees to his leadership, but disagrees with his putative policies.

Respectfully,
Michael Gordon

--
Michael S. Gordon
Department of Psychology
University of California, Riverside
Riverside, CA 92521

25.08
DOE

WaterSuite
by Powerware Solutions, Inc.

January 30, 2001

George W. Bush
President of the United States
1600 Pennsylvania Avenue NW
Washington, DC 20500

Dear Mr. President,

Congratulations on your election as the president of our great country. I look forward to the initiatives you will bring forward in the coming months and years.

The purpose of my letter is to convey a simple encouragement with regard to this countries energy policy: consider the role that information technology can play in integrating supply and demand viewpoints. *An integrated supply/demand policy (a supply chain viewpoint) has the potential to bring unforeseen efficiencies to energy use.*

As long as supply and demand management remain as segregated domains, there is a tremendous opportunity loss, perhaps 20-30%, in the economics of energy. This concerns not just the energy commodity, but the infrastructure and the industrial process design industries that surround it.

As the founder and manager of a small technology company striving to bring solutions to the last link in the energy supply chain, where the process is managed, I look forward to innovative and progressive energy policies from your administration.

Please consider me at your service. I would be pleased, at any time, to share the perspective of an entrepreneur on the front lines creating information-based solutions for energy users.

Sincerely,

Richard A. Jamieson, Ph.D.
CEO

[redacted]
526 University Dr. E. / Building A • Second Floor • College Station, Texas 77840
Tel 409.693.9222 • Fax 409.693.7513 • www.powerwaresolutions.com

CAITHNESS ENERGY, L.L.C.

The Grace Building
1114 Avenue of the Americas
New York, New York 10036-7790

James D. Bishop
Chairman and CEO

2000-002650

Via Facsimile and Federal Express

January 30, 2001

The Honorable Spencer Abraham
Secretary of Energy
Attn: F. Chase Hutto III
US Department of Energy
1000 Independence Avenue S.W.
Washington, D.C. 20585

Dear Secretary Abraham:

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As the new administration begins to deal with the issues and challenges surrounding this country's energy policy, I believe we can bring a unique perspective to your deliberation. I would be honored to meet with you at your convenience to discuss these issues. I have enclosed a draft of our soon to be updated brochure.

Kind personal regards,

Sincerely,

James D. Bishop, Sr.

cc: Leslie J. Gelber
Susan and David Easlick

Fusion Power Associates

Stephen O. Dean, Ph.D., President

January 31, 2001

The Honorable Spencer Abraham
Secretary of Energy
U.S. Department of Energy, S-1
1000 Independence Avenue, SW
Washington, DC 20585

Re: Fusion and Energy Policy

Dear Mr. Secretary:

Today, our nation is urgently searching for solutions to the power shortfall in the Pacific Coast region. While the immediate problem has many contributing causes, energy supply is essentially a long-term issue. We must not only react to recurring crises but also prepare for the future. In addition to acting to ameliorate the immediate problems, we urge you to address the nation's long-term energy needs through creation and funding of a focused R&D effort to expand our future commercial energy options.

We advocate an expanded, sustained energy R&D effort to provide the United States and the world with the energy it will need for the 21st century. The focus of this effort should be to provide new economic and environmentally acceptable energy technologies as soon as practical. The options that present themselves for mid-term application include advanced technologies for improving energy end-use efficiency, cleaner burning of fossil fuels, improvements in nuclear fission technologies, and less costly and more efficient renewable energy options. For the long term, we urge an accelerated effort to develop fusion energy.

Fusion power plants, when developed, offer a number of specific advantages, including an abundant fuel supply, no air pollution and much reduced risk from hazardous radioactive materials. At present, the United States has an excellent but underfunded scientific research program on fusion. Other nations, notably Japan and the European Union, pursue both scientific research and also a focused development strategy aimed at eventual commercialization.

We urge the United States to strengthen greatly its research into the fundamental science and advanced technology of fusion energy and to prepare a strategic plan for the realization of practical fusion energy as an important element in a long-term, environmentally responsible energy development strategy.

On August 9, 1999, the Fusion Energy Task Force of the Secretary of Energy's Advisory Board (SEAB) completed and delivered its Final Report: "Realizing the Promise of Fusion Energy." This report concludes: "the threshold scientific question — namely, whether a fusion system producing sufficient net energy gain to be attractive as a commercial power source can be sustained and controlled — can and will be solved." The report also noted that U.S. funding for fusion energy research is "subcritical" at this time.

We very much appreciate your efforts to establish a responsible energy research and development policy for both the near and long term, to prevent recurrence of our present energy supply difficulties.

Respectfully submitted on behalf of the following signatories,

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American Association of Petroleum Geologists

An International Geological Organization

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February 1, 2001

Hon. Spencer Abraham
Secretary of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

Dear Mr. Secretary;

In my capacity as President of the AAPG Division of Professional Affairs, I am enclosing a copy of a speech I gave last October regarding the causes of the Energy Crisis and some recommended solutions. Also attached are some useful energy statistics to back up arguments made for certain energy policy proposals.

I would like to serve on your energy policy task force. It would be an appropriate appointment as I represent the 30,000 professional earth scientists of the AAPG on energy policy matters. We are the geoscientists whose job it is to find the nation's energy resources.

Yours sincerely,

G. Warfield Hobbs

attach.
cc: Vice President Cheney

THE ENERGY CRISIS: WHY HAS IT HAPPENED AND WHAT CAN WE DO ABOUT IT?

By

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Presentation to the

PITTSBURGH ASSOCIATION OF PETROLEUM GEOLOGISTS
Pittsburgh, Pennsylvania

Thursday, October 12, 2000

* * * *

High oil and gas prices, and the prospect of possible shortages of natural gas and heating oil this winter are making headlines. Energy is finally an election issue. I am disappointed, however, in the superficiality of the energy recommendations of both presidential candidates. But what can we expect. After all, there has been no comprehensive energy policy for over a decade. America has become addicted to cheap energy.

The public will be howling for relief, and for an explanation. Politicians will once again be pointing the finger of blame at the oil and gas industry, not at themselves.

As petroleum geologists, the pending energy crisis presents a tremendous challenge, and a great opportunity. We must be able to explain, as scientists, why there is an energy crisis, and what rational solutions exit to remedy the situation.

On July 26th, in my capacity as President of the DPA, and as a spokesman for the AAPG, I was invited to testify before the US Senate Committee on Energy and Natural Resources concerning the issue of natural gas supply, rising prices, and access to public lands. I want to share with you what I had to say to Congress in late July, and I would also like discuss my thoughts on energy policy going into the election.

My speech is full of useful statistics, and recommendations for a National Energy Supply Policy. So listen well, and take notes, because I want you to make the same arguments before the public in your own communities.

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* * *

IS THERE A SUPPLY CRISIS?

Is there really a pending energy crisis? The statistics point to a very serious problem. Demand has finally caught up with supply, as the recent run-up in commodity prices so profoundly demonstrates. Complacency and addiction to cheap energy have prevailed for the past 15 years. This is now about to end, not with a whimper, but a gigantic thud!

Crude oil prices have more than tripled from about $10/bbl in late 1998 to more than $30/bbl this year. The average NYMEX spot gas price at the Henry Hub was $2.25/MMBTU in 1999. Spot natural gas prices have doubled this year alone to more than $5.50/mcf for winter delivery, and could spike to over $7.00/mcf. According to EIA projections, residential gas prices are expected to average $8.58/mcf, up 29.5% from last winter's average of $6.61/mcf. At current prices, residential gas consumers can expect a $200 to $300 increase in their winter gas-heating bill; and some can ill afford that cost.

The NYMEX 12 month and 24 month futures prices in excess of $4.60/mcf and $30/bbl indicate the market makers believe high oil and gas commodity prices are going to be the norm for the next two years.

Commodity prices have skyrocketed because the market perceives supply to be restricted. Is this truly the case?

Natural gas presently supplies about 25% of the nation's domestic energy requirements. Last year, gas consumption in the United States was approximately 22 Trillion cubic feet (TCF). According to the Department of Energy Information Agency (EIA), proven domestic gas reserves as of December 31, 1999 were 164 trillion cubic feet (TCF). At a consumption rate of 22 TCF/year, proved reserves represent only a 7.4-year supply.

Recent studies by the EIA, Gas Research Institute, and the National Petroleum Council (NPC), indicate annual demand will grow to as much as 32 TCF over the next 15 to 20 years. In its 1999 study, the National Petroleum Council projected annual demand to reach 29 TCF as early as 2010. At 32 TCF/year consumption, currently proven reserves represent only a five-year gas supply.

Gas demand is soaring, particularly as a "clean" fuel for electric power generation. Security analysts at Dain Rauscher Wessels, Inc. estimate that more than 275 new gas-fired power plants are planned to begin operation by 2006. These new electric power plants are expected to consume an additional 8.5 TCF/year.

Proven gas reserves in the United States have dropped 43% during the past 30 years, from 290 TCF at year-end 1970, to only 164 TCF now. In a report issued in late May, the EIA forecast that the nation's proved reserves would decline a further 2% during 2000, due to increased demand, and the very low drilling levels of the past few years. This may now turn around slightly with current higher commodity prices.

According to the recent EIA October Energy Report, working natural gas inventories in storage as of the October 1st beginning of the winter heating season were estimated at 2,530 bcf, or 227 bcf below the five year (1995-1999) average of 2,757 bcf. Below-average stock levels are a result of lagging USA production due to low commodity prices and increasing gas demand for power generation. Increases in summer gas power generation for air conditioning in the Southwest this year, helped constrain inventory accumulations to half the normal rate. Operators of gas storage facilities were also reluctant to purchase gas at the unusually high prices that prevailed in the late spring and early

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summer, on the unfulfilled expectation that gas prices would decline over the summer.

EIA believes there will be adequate gas supplies if a "normal" winter occurs. However, end of season stocks next spring will be at the lowest level since 750 bcf was reached in 1996. There is now no marginal supply for extended cold weather demand, or any significant gas production or deliverability disruption this winter. If we have a "cold" winter, and it is about time, regional supply disruptions are likely in my opinion. Schools and factories may be shut to conserve gas for electric power generation and residential heating.

The supply situation in the winter of 2001 could be worse than this coming winter if we have a cold winter scenario, hence the high 24 month NYMEX option prices.

The public must be made aware of the seriousness of the gas supply situation, and prepared for significant price increases and possible regional gas curtailments.

OIL SUPPLY

World demand for petroleum was 74.8 million barrels per day in 1999, and is expected to rise to 75.9 MM bbl/day this year. The United States consumes 26% of the world's petroleum, or 19.5 MM bbl/day.

In 1999, the USA produced 5.88 MM bbl/day of crude oil and lease condensate. Crude plus natural gas liquids production totals 9.0 million bbl/day. In order to meet our 19.5 MM bbl/day petroleum demand, the U.S. now imports about 56% of its crude oil and refined product needs. This demand means that USA energy policy very definitely impacts world oil markets and national economies.

Crude oil production in the US has declined 33% since 1985, from 8.9 million barrels per day (MM bbl/day) to 5.9 MM bbl/day. At the same time, however, domestic petroleum demand has increased 23% from 15.90 MM bbl/day to 19.58 MM bbl/day.
Throughout 1999, domestic crude oil production declined 370,000 BOPD, or 5.9% from the 1998 average. Production is expected to climb somewhat this year and next, as new fields are brought on stream in Alaska and the Deep Water Gulf of Mexico.

In the face of rising domestic demand, and decreased levels of investment and exploration success, proven USA crude oil reserves have declined 26% from 28.4 billion barrels in 1985 to 21 billion barrels at year-end 1999. After the giant Prudhoe Bay Field discovery in 1970, US proved reserves reached a peak of 39 billion barrels.

In 1999, there were only 20,770 oil and gas well completions in the United States. This is a pathetic shadow of the 70,000-85,000 wells drilled per year in the period 1980-1985, when we were able to actually increase deliverability and make significant new reserve additions beyond just replacing annual consumption.

RIG COUNT

The average drilling rig count was only 623 per week in 1999, an all-time low since the 1940's. In 1982 there were over 4,000 drilling rigs at work in the United States. The rig count is a little over 1000 now, but that is not adequate to significantly increase domestic oil and gas deliverability, nor make a long-term increase in year-end reserves.

In its July 17, 2000 Energy Equity Research report, security analysts Raymond James & Associates, Inc. stated that there are only about 1,000 U.S. drilling rigs available to go to work on short notice (800 onshore and 200 offshore). An additional 100 to 150 rigs could be refurbished for service at an additional investment of about $1 million per rig. Therefore, the analysts conclude, a sustained rig count of no more than 1,100 is unlikely to be achieved before

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2001. Finding and training crews to operate these rigs is a serious obstacle. An article on page one of the October 11th issue of the *Wall Street Journal* highlighted the serious shortage of rigs, rig equipment and supplies, and personnel.

SHOULD WE WORRY ABOUT DOMESTIC OIL SUPPLY?

Should we worry about the decline in our domestic oil reserves and crude deliverability? The answer is a resounding yes! The US, from a strategic point, has become dangerously dependent on crude oil imports form politically unstable countries. At the time of the 1973 Arab oil embargo, the US imported only about 35% of its crude requirements. At a current 56% import level, we are significantly more vulnerable to a supply disruption.

The Middle East produces about 20 million barrels of oil per day, and has proven reserves of 673 billion barrels, representing about 65% of total world proven reserves. Saudi Arabia alone has reserves of 259 billion barrels and produces 8 million barrels per day. It is entirely possible that we could wake up one morning to a news report that the King of Saudi Arabia has been assassinated by an anti-Western fundamentalist Muslim terrorist group, and that the rebels will destroy the principal Saudi oil export terminal with a weapon of mass destruction, unless certain demands are met. A world supply and price panic would explode on the news of the threat alone.

The West can no longer take access to unlimited Middle Eastern and Central Asian oil for granted. We have competition from the developing economies.

Worldwide petroleum demand is climbing at about 2.4% annually, and will likely take off when the Asian economy moves once again into high gear. There is a new and fast growing "consumer class" in the emerging economies of the world. Here is a very scary statistic - the USA has less than 5% of the world's population, yet consumes 26% of the world's petroleum (and mineral) resources. We use approximately 24 barrels of crude oil per capita per year. China, India, Pakistan and Indonesia, with 40% of the world's population use less than 1 barrel per capita/year. Asia is entering the mass consumer age where everyone wants electric power, consumer items and motorized transportation. How will the world supply the raw materials for these economies? We have already found the easy stuff.

China realizes that it must access international crude supplies to meet its growing domestic demand. The Chinese national petroleum company has actually outbid major western oil companies for oil field development projects in Kazakstan and Iran. Pipelines are being planned to bring Caspian and Siberian oil to China. The country is also building a modern guided missile equipped navy to protect its sea-lanes. The Chinese will be competing head-on with our children for Middle Eastern, Central Asian, and Siberian oil. The competition has already begun. India is also in the race, and is actively pursuing exploration and development projects in the Middle East.

Venezuela has always been a fallback position to Middle Eastern oil. However, under the leadership of President Chavez, the USA must also not take uninterrupted supply from Venezuela for granted.

An important aspect of America's foreign policy is unequivocal support for Israel. Israeli control of Jerusalem, a place that is also sacred to Muslims, is presently a flash point that could engulf the Middle East in another war. We must have a balanced policy with regard to Israel and the Muslim oil producing nations, or run the risk of another embargo. In my opinion, unless Jerusalem is made into an independent city-state, open to all, and under the governance

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of the United Nations, lasting peace will never come to the Middle East. Continued oil volatility will prevail without peace.

In addition to the national security issue, the United States also must be concerned about the fact that crude oil imports are the largest component of the significant USA balance of trade deficit. Last March, the USA had a record trade deficit of $30.2 billion, when the nation's foreign crude oil bill hit a then record high. The EIA estimated total 1999 oil imports at $66.9 billion. This year that bill will be significantly higher.

HEATING OIL

Of more immediate concern, and perhaps a major factor in my "crisis" characterization of the national energy situation, is the winter heating oil supply. Very strong demand for gasoline this year, coupled with high prices, has resulted in refiners working flat out this past summer to meet gasoline demand. Significantly less distillate was produced as a result.

According to the EIA, distillate stocks are currently about 25 million barrels, or 21% below the middle of the distillate stock range. On the East Coast, where thirty-six percent of homes use heating oil, stocks are 40% below 1999 levels. In the New England states, where a cold snap last winter caused supply disruptions and huge price spikes, stocks are 65% below 1999 levels. God forbid should we have a really cold winter in New England!

EIA's base case winter fuel distillate requirement for 2000 is 3.88 MM bbl/day, assuming normal winter weather. In order to assure supplies in the Northeast, the president has established an emergency heating oil reserve of 2 MM bbl/oil in New England. This could backfire, if private suppliers cut back on their storage levels because they do not want to stock their tanks with high price fuel oil, and then have the price collapse when the emergency reserve is released.

GASOLINE SUPPLY

Forty-three percent of the nation's crude oil is refined into motor gasoline. Last year this amounted to 8.4 MM bbl/day. After the crude oil price spike in the 1979-1981 period, the nation responded by boosting average automobile mileage to over 20 gallons per mile. This was an important conservation measure, but it has been counteracted by the fact that there are now twice as many cars on the road.

Motor gasoline demand has increased 28% from 6.58 MM bbl/day in 1981 to 8.47 MM bbl/day, despite our conservation efforts.

This past summer price spikes and supply disruptions were experienced in California and the Midwest. This was due in part to the June 1st deadline to sell reformulated gasoline, rising crude oil prices, plus a refinery fire in California.

Our gasoline worries are not over. In its infinite wisdom, the EPA mandated the addition of MTBE to gasoline in 1992 and 1995 to reduce emissions. Unfortunately, MTBE is now causing serious groundwater pollution. California has banned MTBE as of January 1, 2003. EPA would like to ban MTBE nationally by 2005. According to refinery consultants Purvin & Gertz, the U.S. refining industry has developed a substantial reliance on MTBE, particularly on the East Coast and West Coast. If MTBE use is eliminated, refiners will have to compensate for the loss of its octane, volume, and other properties through expansion of refining facilities and higher-cost processing operations. Billions of dollars were spent by the refiners to comply with the original MTBE requirement. For What?

The EPA is also mandating reductions in motor fuel sulfur content.

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Diesel fuel, which currently has a sulfur content of about 500 ppm, is supposed to have only 15 ppm sulfur by 2007. The Federal program to reduce the sulfur content of all U.S. gasoline will require significant refining investment. Increases in refining costs and the tighter gasoline supply/demand balance will have their greatest impact on gasoline prices and octane values in the U.S. market, with further effects in other world markets.

The public can expect further gasoline price spikes and supply disruptions as a result of the EPA action on MTBE and sulfur. Will anyone accuse the EPA of price gouging?

USA REFINING CAPACITY

Since 1981, the number of operating refineries in the United States has declined 47% from 324 to 174, representing a loss of over 3.0 million bbls/day of capacity. Refinery utilization has increased from 69% in 1981 to 96% in 2000.

Refinery closings were caused by deregulation (elimination of price controls and allocations), and the cost to retrofit older refineries to meet current environmental regulations. There have been no new grass-roots refineries built in more than a decade. According to the EIA' April, 2000 Energy Report, "financial, environmental, and legal considerations make it unlikely that new refineries will be built in the United States."

In an October press release in response to Vice-President' Gore's characterization of "Big Oil" as "gougers" and "profiteers", ExxonMobil said that it makes a profit of five cents on every gallon of gasoline it sells, while Federal and State Governments take an average of 40 cents in taxes for every gallon sold. The ExxonMobil press release went on to point out that:

"Since the end of World War I, inflation-adjusted gasoline prices have steadily declined, interrupted only by a few peaks and valleys. Through the end of World War II, when average real incomes for Americans were much lower than they are today, gasoline prices varied between $2.00 and $2.50 per gallon ($1999). The price then dropped steadily to about $1.50 per gallon before the oil shocks of the 1970s and early 1980s drove prices temporarily higher, peaking at over $2.50 in 1981. The lowest gas prices of the period occurred in 1998, when low crude prices drove gasoline near, and in some parts of the U.S. below, $1.00 per gallon. Prices have moved up sharply in 2000, but from a very low level and continue to be below historical levels.

The declining price of gasoline has contributed to the growth of our standard of living over the years. In 1966, the average American family spent each year a total of about $35,000 (in $1999), of which about three percent went for gasoline. Today, the average American family spends over $60,000 each year, with only two percent on gasoline. Over the same period, the vehicle fleet (cars, vans, light trucks and SUVs) increased from 91 million to over 200 million, and the average number of miles driven annually per vehicle rose from 9,500 in 1966 to almost 12,000 today. With vehicle efficiency improving from about 13.5 miles per gallon in 1966 to nearly 20 mpg today, the average cost of driving one mile has fallen from over 12 cents in 1966 to about six cents in 1999. Recent gasoline price increases have brought that cost back to only about seven cents per mile.

In its October, 2000 Energy Report, the EIA said "Regular unleaded, self-service retail motor gasoline prices hit their highest monthly level ever, in nominal terms, averaging $1.63 per gallon in June. Still, in real terms (adjusted for inflation) that price was about 40 percent lower than the price experienced in March 1981."

Crude oil prices over the past 10 years have consistently lagged the consumer price index inflator. The average price from January 1990 through August, 2000, has

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been $19.95. The price spiked over the CPI during the Persian Gulf War, briefly in late 1996-early 1997, and recently in 2000. Crude oil prices rose from an inflation adjusted 53-year low of $8.03/bbl in December, 1998 to an average price of $22.55/bbl in December, 1999.

Consumers are screaming about high gasoline prices, but are quite willing to pay $3.50/gallon for bottled water. At $30/barrel, crude oil costs 71 cents per gallon at the wellhead. If after transportation, refining, storage, marketing, insurance and environmental compliance costs, Exxon makes only 5 cents per gallon profit on its gasoline, imagine the margin of Perrier on a gallon of water! Do you remember what you paid for a can of soda or newspaper in 1981, versus today?

* * *

PETROLEUM INVESTMENT

A number of factors are responsible for the decline in USA oil and gas production and reserves since the mid-1980's. Low, and unstable commodity prices have discouraged new investment. The stock market has been a much more rewarding area for "risk" capital. Frankly, wildcatting with a "dot.com" stock, where one could have a 25% stop loss order to limit the downside, and instant liquidity, is a lot less risky than drilling a hole in the ground.

According to the Financial Reporting System, the 23 largest producers reported an average return on assets of just 5.4% over the 12-year period from 1986 through 1997.
During the past decade, the average oil industry return on capital employed has been only a meager 7-8% due to low commodity prices. With these returns, why would anyone want to invest in the upstream energy sector? Adequate new capital has not come into the industry, which explains in part, why the supply side of the equation has deteriorated so badly.

The December 1999 National Petroleum Council study concluded that the growth in natural gas demand will require funding of approximately $1.5 Trillion (in 1998 $). This includes $700 billion for operating expenses, and $658 billion dollars in upstream capital expenditures from 1998 through 2015. This latter figure includes all exploration, development, production, and gathering capital expenditures. In order to satisfy supply growth an increased annual average capital expenditure of $39 billion per year is required from 1999 through 2015, versus an average of $27 billion from 1991 through 1998. However, these needed levels of investment will take place only if investors have confidence that competitive rates of return will be earned. This will require an entirely new "attitude" toward the petroleum industry in Washington.

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DOMESTIC PETROLEUM RESOURCES

The public is wondering whether the United States has enough oil and natural gas domestically, to meet future demand?

Some energy analysts will argue that the United States has exhausted its petroleum resources, and that there are no significant new reserves to be found. This is categorically at odds with the facts.

The most recent resource assessments of the US Geological Survey (USGS), Minerals Management Service (MMS), EIA, and the National Petroleum Council, confirm that the United States has huge remaining oil and gas resources.

According to the USGS, the technically recoverable onshore U.S. oil resource base is 110 billion barrels. This is five times our onshore and offshore proven reserves of 21 billion barrels.

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The 1999 National Petroleum Council (NPC) study concluded that the United States has a remaining gas resource base in the Lower 48 States of 1,466 TCF. It should be noted that only 157 TCF, or just 10% of the identified resource, is considered proven. There are an additional 313 TCF in Alaska; however, this gas is useless without a pipeline to the Lower 48 markets. The total identified USA gas resource, including Alaska, is a whopping 1,779 TCF. Even at 32 TCF/year consumption, there is more than a 50-year supply. Cumulative domestic production over the past hundred plus years is estimated to be about 890 TCF.

The United States has the potential to be self sufficient in natural gas supply well into the 21st Century. We have significant oil resources, but they are not likely to be adequate to satisfy future demand. However, unless the petroleum industry is allowed access to the areas where the remaining resources are located, the domestic energy "crisis" will become worse.

WHERE ARE THE REMAINING RESOURCES?

There are significant remaining known oil and gas resources in the traditional onshore producing areas of the Gulf Coast, West Texas and in the Mid-Continent. However, these areas are now intensely drilled and blanketed with 3-D seismic, and are not yielding the large new discoveries required to replace the nation's depleting proven reserves. Major oil companies and large independents are exiting onshore exploration and moving their operations into the sparsely drilled waters of the Deep Gulf of Mexico, and overseas.

Many small oil and gas companies, and the majority of the independent prospect originators, are having trouble finding partners, as well as the capital, to drill the smaller reserve exploratory prospects that remain in the traditional producing areas. Higher oil and gas prices have significantly increased the drilling rig count; however, over 90% of the current drilling activity is for the development of known reserves.

The 1999 NPC report concluded that the most prospective areas for major new discoveries, particularly natural gas, are on public lands in the Rocky Mountain sedimentary basins, offshore in the Gulf of Mexico, in the Eastern Gulf of Mexico, and on the Atlantic and Pacific OCS. Despite the huge potential of these areas, Federal law presently prohibits exploration on the Atlantic and Pacific OCS, and in the Eastern Gulf of Mexico. Access to much of the remaining resource potential of the Rocky Mountain basins is restricted or closed.

Exhibit 1 is a map from the NPC report that shows the resource potential of the Lower 48 public lands that are closed and/or subject to severe restrictions. The total estimated gas resource of these areas is 213 TCF, or a nine-year supply at current rates of gas consumption. It is likely that with further exploration, these resource figures would increase significantly.

The total area of the U.S. Federal offshore, including Alaska, to the 200-mile economic limit, is about 2 billion acres. Only 2 percent has been leased. In its 1995 study, the Minerals Management Service assessed a mean undiscovered recoverable resource of 46 billion barrels of oil and 268 trillion cubic feet of natural gas in the Federal OCS. This is 2.5 times the offshore reserves found to date.

The next slide shows the USA offshore where the MMS estimates these potential resources. On June 12, 1998, By Presidential "Decree", all but the Central and Western Gulf of Mexico were excluded from leasing until 2012.

The previous NPC map does not include Alaska. In its 1995 National Oil and Gas Assessment of Onshore Federal Lands, the USGS estimated that the Northern Alaska province accounts for more than half

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economy, and to keep its citizens warm in the winter and cool in the summer.

ENVIRONMENTALLY RESPONSIBLE RESOURCE DEVELOPMENT

Development of the oil and gas resources in environmentally sensitive areas of the Rocky Mountains, the North Slope of Alaska, the Eastern Gulf of Mexico, and the Pacific and Atlantic OCS, can be done in an environmentally responsible manner, with no lasting harm.

Over the past 25 years, the environmental lobby in the United States has convinced the public that resource development necessarily means that the environment will be degraded and forever altered. Drilling, production, and environmental impact mitigation technological advances, as well as a new corporate environmental attitude that "Green" is good business, have made this perception obsolete. Oil and gas are produced every day in an environmentally responsible manner in environmentally "sensitive" areas all over the world. The greatest threat to the environment comes from the movement of oil to market by tankers, not by pipeline.

To illustrate that drilling and production can take place in a safe and environmentally sensitive manner; we can look to the East Coast of Canada. For more than thirty years, offshore exploration, and now production, have calmly co-existed in the Canadian Maritimes with tourism and commercial fishing, in a cooperative, and even supportive environment, for the betterment of all concerned communities. More than 300 exploratory wells have been drilled within the offshore outer continental shelf waters of the Canadian Atlantic. At least 12 trillion cubic feet of natural gas and 2 billion barrels of oil have been discovered so far. More than 125,000 barrels of oil and 400 million cubic feet (MMcf) of natural gas are being produced per day within the prime commercial fishing waters and the pristine tourist coastlines of Eastern Canada. Much of this new gas is now flowing to New England.

There is a major new deep Jurassic Age reef trend discovery offshore Nova Scotia. If successfully delineated, this new field alone could add an additional 400 MMcf/day gas production. Incidentally, John Hogg, the former chairman of the AAPG House of Delegates, and a Canadian, originated the new gas discovery.

Petroleum geologists believe that the same types of oil and gas accumulations that exist in the Eastern Canadian offshore, may extend south along the U.S. Atlantic Coast, from George's Banks to the Carolina Trough, a distance of almost 1,000 miles

The Canadians have also successfully developed and have been producing natural gas from their portion of Lake Erie since the 1950's. The US portion of Lake Erie has a thicker sedimentary section, and would likely be more productive. New Yorkers could use the gas. United States law, however, prohibits exploration in the Great Lakes.

Brazil is successfully exploiting its substantial Atlantic OCS petroleum resources in an environmentally responsible manner. In doing so, it has become the world leader in ultra-deep water production technology.

New technologies also now permit oil and gas development in a way that minimizes onshore surface disruption in environmentally sensitive areas. The British, for example, who are even more fussy about open spaces then we are, agreed to develop the giant Wytch Farm Oil Field under Poole Harbour, smack in the middle of the most heavily visited coastal zone of the South of England. At the Wytch Farm development, long reach deviated wells are drilled in a radial pattern from a camouflaged central well pad onshore, to locations up to seven miles out into scenic Poole Bay.

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Opponents to petroleum development cite old operating practices, and prior environmental abuses, that are simply out of touch with modern reality. Just like the Canadians, British, Brazilians, Norwegians, Qataris, Thais, Australians, and many other petroleum producing nations, Americans likewise can develop their offshore and onshore energy resources in environmentally sensitive areas in a safe and rational manner. To believe otherwise is simply inconsistent with what is being done every day all over the world.

As someone who vacations on the New England coast, and loves to sail and fish in Long Island Sound, and in the Gulf of Maine, I have a vested interest in the environmental consequences of petroleum operations in the Atlantic OCS. I can truthfully testify that I have no fears, and am confident that the environmental risks of exploring for oil and gas offshore New England are minimal, and acceptable. Experience in the Gulf of Mexico has demonstrated the best fishing is actually right around the artificial reefs created by offshore oil and gas production platforms.

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PETROLEUM SUPPY POLICY RECOMMENDATIONS OF THE AAPG

The petroleum industry can and will be able to provide the oil and gas supplies needed to maintain the economic stability and security of the United States. However, to do so, the nation must address three critical issues. These are: 1) Improved access to public lands; 2) Reform of the regulatory process; and 3), Fairer tax treatment to stimulate capital formation and investment.

1. Public Lands Access

In regard to the public lands access issue, the AAPG recommends the following:

- Lifting of the Moratorium on OCS Exploration and Development in areas where it exists today.
- Opening of the Eastern Gulf and Atlantic Margin OCS to Area-wide Leasing.
- Reform of the Dept. of Interior Policy regarding access to public lands in the Rockies.
- Opening the 1002 Area of the Arctic National Wildlife Refuge to Exploration.
- Amendment of the Federal Antiquities Act to prevent its misuse in restricting access to public lands.
- Balancing the needs of all stakeholders in shaping public lands policy.
- Assurance that there is no net loss of state and private land in creating new land restrictions.

2. Regulatory Reform

Reforms are needed to streamline the federal petroleum regulatory and permitting process to stimulate natural gas exploration and production. Rules and regulations must be based on scientific reality, not on popular environmental misconceptions. The practical economic impact of all regulations must be considered. In this regard, the AAPG recommends the following:

- Reform the Clean Water Act and Endangered Species Acts, especially

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those sections that pertain to wetlands.

- Reform the procedures used by the Department of the Interior in managing energy resources on public lands in the Rocky Mountain region and elsewhere.

- Limitation of the extensive delays of the permitting process.

- Limitation of the ability of the EPA to regulate drilling muds and hydraulic frac fluids as "hazardous wastes".

3. Tax Reform

The independent petroleum industry has historically drilled over 80% of the nation's oil and gas wells. However, over the past 15 years, low oil and gas prices, changes in the tax code, and the attraction of alternative higher yielding investment opportunities, has resulted in capital starvation for independents. Petroleum exploration and production are extremely capital intensive and high risk. In order to get the independents back to work finding and developing the nation's gas resources; we must stimulate capital formation.

Technology and dot.com stocks have peaked. With high gas prices, investors in New York and elsewhere are now beginning to look for direct investment opportunities in natural gas. However, most non-industry investors are deterred by the liability exposure of a direct working interest in a gas well. They would prefer to be limited partners, and be rewarded through tax benefits for assuming exploration risk to drill for a depleting asset.

The role of taxation is critically important to the development of oil and gas resources. However, the U.S. Tax Code currently contains provisions that serve as major disincentives to petroleum investment. While we currently enjoy significant budget surpluses, Congress can afford to reform the tax code.

The AAPG recommends the following tax reform legislation to stimulate the investment needed to increase domestic natural gas supply.

- Restoration of the write-off of intangible drilling costs for the passive investor. This tax deduction was eliminated by the Tax Reform Act of 1986, and effectively wiped out the major source of drilling capital for small independent oil and gas exploration companies. Billions of dollars of new drilling capital would quickly become available to the industry through restoration of the Intangible Drilling Cost (IDC) tax deduction for passive limited partnership investors.

- Elimination of the onerous Alternative Minimum Tax.

- Allow expensing of delay rentals in the year incurred, not capitalizing them as currently required.

- Allow expensing of geological and geophysical costs in the year when the costs are incurred.

- Make permanent the suspension of the net income limit for percentage depletion on marginal properties.

- Raise the depletion allowance provision to previous levels.

CONCLUSION

The United States has abundant petroleum resources. However, absent access to these resources on public lands, and regulatory relief and tax incentives to stimulate domestic petroleum exploration and development, the nation will face a

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serious gas supply shortage, and will continue its dangerous reliance on imported crude oil.

The AAPG recommends that Congress focus its attention on the energy issue without further delay. Presidential candidates also need to respond realistically to the energy crunch, because high prices and supply disruptions will be front-page news in November. Politicians must also realize that kicking the petroleum industry in the shins and shaking fists at OPEC, makes for good press, but is no solution to the pending natural gas supply crunch.

A National Energy Policy that balances the interests of all stakeholders, should be developed and implemented as quickly as possible. If this is not done, and soon, some Americans will truly run the risk of "freezing in the dark". Time is running out! The proverbial "doo doo" is hitting the fan as we speak.

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Skip Hobbs is Managing Partner of Ammonite Resources Company, a firm of international petroleum technical and business consultants that Mr. Hobbs formed in 1982. Ammonite is headquartered in New Canaan, Connecticut and has associate offices located in the oil patch of the United States, in Canada, the United Kingdom, and Argentina. The "Energy Forum" webpage on the <www.ammoniteresources.com> website contains numerous articles and statistics on energy issues.

THIS PAPER MAY BE FREELY REPRODUCED AND DISTRIBUTED. I URGE ALL AAPG MEMBERS TO SPEAK TO LOCAL COMMUNITY GROUPS AND THEIR LEGISLATORS ABOUT THE ENERGY SITUATION.

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As an addendum, I have attached comments regarding several issues that Vice President Gore has incorporated into his "energy policy". At the risk of being somewhat partisan", I suggest that the Republicans confront the Democrats with some of the statistics and issues which follow.

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ENVIRONMENTAL MYTHS - ANWR

The AAPG believes that the 1002 area of the Arctic National Wildlife Refuge (ANWR), and the similar coastal plain area of the National Petroleum Reserve-Alaska (NPRA), should be opened to exploration and development. A study recently released by the United States Geological Survey (March, 1998) cites potential economically recoverable oil resources beneath the ANWR Coastal Zone 1002 Area of 5.7 to 16 billion barrels of crude oil, with a mean expected resource of 10.3 billion BO. Mean peak production rates of 1.0 to 1.35 million BOPD are expected. The 1002 Area represents only 8% of ANWR's 19 million acres. Less than 1 percent of the land within the 1002 area would be affected by petroleum exploration and development activities. Parts of the coastal plain of the NPRA, held back by the Bureau of Land Management (BLM) from the 1999 lease sale at the instruction of the Secretary of the Interior, contain an estimated minimum of 1.5 billion barrels.

The major objection to development of the Prudhoe Bay Field and Trans Alaska Pipeline was the potential threat of the development to Caribou migrations. According to the US Senate Committee on Energy and Natural Resources, the Prudhoe Bay herd, also known as the Central Arctic Herd has increased from 6,000 in 1978 to 19,700 in 2000. The caribou are not

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bothered by the petroleum development infrastructure – in fact they prefer it to the prospect of having their calves devoured by wolves.

Opponents of ANWR development say that it is not worth forever despoiling ANWR for a few month's of oil supply. This is a specious argument that assumes that supply from all other sources ceases during the life of the ANWR reserves. According to Government studies, the 2001 area of ANWR, could produce over 1.0 MMBO per day. Like the Prudhoe Bay area, production operations will likely run for more than 25 years, providing vital crude oil and natural gas for the nation's economy, significant employment in Alaska and in the Lower 48 from production operations and equipment supply, hundreds of millions of dollars of annual state and federal tax and royalty income, as well as a reduction in the outflow of funds for the purchase of imported crude oil.

During this year Secretary of Energy Bill Richardson has repeatedly been on his hands and knees before the Arab OPEC producers to beg for production increases of initially 200,000 BOPD and then 800,000 BOPD. This is a humiliating gesture for the United States, the most powerful nation in the world. The current supply/demand balance is so precarious now, that even the threat of a storm in the Gulf of Mexico causes oil and gas prices to shoot up momentarily. An incremental 1 million barrels of oil per day from ANWR for a sustained period of at least 10 years would make a huge difference in the supply side equation.

During 1999, according to the EIA, the US obtained 23% of its oil imports of 10.6 MM bbl/day, or 2.43 MM bbl/day, from the Persian Gulf Region. If one were to use the same argument as the ANWR opponents about supply, development of potential ANWR reserves of 10+ billion barrels would eliminate 11 years of dependency on imports from the dangerously volatile Middle East.

The giant Alaskan Prudhoe Field went into production in 1977, and produced its 10 billionth barrel of crude oil in May, 2000. The field reached a regulated peak of 1.5 million barrels per day in 1979, and produced at this rate through 1988. Production is now in a steep decline.

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THE MYTH OF ALTERNATIVE ENERGY

Vice President Gore believes United States Energy Policy should focus on conservation and alternate energy, not increased supply. Here are the statistics regarding sources of primary energy and electric power.

Total U.S. Energy Consumption by Primary Energy Source, 1998 (EIA Sept. 1999)

Petroleum		40.7%
Natural Gas		24.1%
Coal		23.3%
Nuclear	7.9%	
Hydro		3.8%
Other		0.2%
Total:		100.0%

USA Electicity Supply By Source in 1999 (Calculated from EIA, October 2000 data)

Coal		50.6%
Nuclear	19.6%	
Natural Gas		15.0%
Hydroelectric		8.3%
Petroleum		3.8%
Geothermal, Solar, Wind		2.4%
Other gaseous fuels		0.3%
Total:		100%

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Since FY1980, the US Department of Energy has provided over $9 billion in research funding for alternative energy projects, yet alternate energy still provides significantly less than 1% of domestic primary energy demand.

Alternate energy is wonderful, and necessary long-term, but simply not practical nor presently economically competitive. Fossil fuels will continue to power the economy for another generation!

Conservation is great but despite almost doubling average automobile mileage in the past 20 years, demand for transportation fuels has skyrocketed. Motor gasoline demand has increased 28% from 6.58 MM bbl/day in 1981 to 8.47 MM bbl/day, despite our conservation efforts. Americans want mobility! How does Mr. Gore propose to provide Americans with the freedom of movement they demand and expect?

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GLOBAL WARMING MYTHS

The earth has warmed and cooled over geological time, and has experienced significant climatic changes over the past 10,000 years of human history. Temperatures are rising, and have probably been doing so since at least 1850, certainly since the depths of the Little Ice Age around 1600. However, there is no concrete, or generally accepted scientific evidence that the current global warming episode is due to anthropogenic causes. Solar, orbital, and tectonic effects, and their combined impact on the world's oceans are the most powerful climate drivers.

In the August issue of *Nature*, researchers Paul N. Pearson and Mark R. Palmer, cite recent scientific evidence that carbon dioxide levels during the Cretaceous Period were over 2000 parts per million, and that "normal" CO_2 might be about 500 ppm. The current level of CO_2 is about 360 ppm. Emissions from fossil fuels may, in fact, cause no climate change due to increased solar reflectivity.

The United States is being asked to accept the terms of the Kyoto Protocol. Under this international agreement, 38 developed nations must reduce their greenhouse gas (CO_2, CH_4, N_2O, HFC, PFC, and SF_6) emissions by an average of 5.2% below 1990 levels during the 2008 to 2012 timeframe. Unless there are some major technological break-through in alternate energy resources, combustion, and emission control technologies, American citizens will have to make significant adaptations to their life-styles to achieve compliance. In the end, these efforts may have no impact what-so-ever on global warming!

Global warming is a fact. Rather than spend a decade arguing over percent industrial CO_2 reductions, and who is to blame, scientists and politicians alike should focus their efforts on how to solve and mitigate the social impact of the significant regional climatic changes that will result. These will include drought, famine, and sea level rises that will cause massive human dislocations.

Mr. Gore is a very strong proponent of the Kyoto Protocol. Does he have an electric car, and power his house with solar panels?

American Association of Petroleum Geologists
An International Geological Organization

ENERGY STATISTICS

The AAPG Division of Professional Affairs is making this information available to all AAPG members and other interested parties so that discussions regarding energy policy can be documented with accurate statistics. Unless otherwise noted, all energy statistics are from the database of the US Energy Information Agency (www.doe.eia.gov). 1999 figures are actuals, and 2000 figures are projections. The weekly "Industry Scoreboard" in the Oil & Gas Journal is a good source for additional statistics.

Total U.S. Energy Consumption by Primary Energy Source, 1998
(EIA Sept. 1999)

Petroleum	40.7%
Natural Gas	24.1%
Coal	23.3%
Nuclear	7.9%
Hydro	3.8%
Other	0.2%
Total:	100.0%

USA Electricity Supply by Source in 1999
(Calculated from EIA, October 2000 data)

Coal	50.6%
Nuclear	19.6%
Natural Gas	15.0%
Hydroelectric	8.3%
Petroleum	3.8%
Geothermal, Solar, Wind	2.4%
Other gaseous fuels	0.3%
Total:	100%

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PETROLEUM DEMAND
(million barrels oil per day)

	1999	2000
World Petroleum demand	74.8	75.9
USA Petroleum Demand	19.52	19.58
USA demand as % World Total	26%	25.8%

USA CRUDE OIL & LEASE CONDENSATE PRODUCTION
(million barrels per day)

1970	1980	1999	2000
9.6	8.6	5.88	5.84

USA CRUDE AND NGL PRODUCTION
(million barrels per day)

1970	1980	1999	2000
11.1	10.1	9.0	9.1

The U.S. now imports about 56% of its crude oil and refined product needs; therefore USA energy policy impacts world markets and economies.

Crude oil production in the US has declined 33% since 1985, from 8.9 million barrels per day (MMBOD) to 5.9 MMBOD. At the same time, however, domestic petroleum demand has increased 23% from 15.90 MMBOD to 19.58 MMBOD.

USA PROVEN OIL RESERVES

USA Proven Oil Reserves @ 12/31/99:	21.0 billion barrels
USA Proven Oil Reserves @ 12/31/85:	28.4 billion barrels

Proven oil reserves have declined 26% since 1985. Following discovery of the giant Prudhoe Bay Field in Alaska in 1970, USA proved oil reserves were 39 billion barrels as of year-end 1970.

MIDDLE EAST COMPARED TO USA

The Middle East produces about 20 million barrels of oil per day, and has proven reserves of 673 billion barrels, representing about 65% of total world proven reserves. Saudi Arabia alone has reserves of 259 billion barrels and produces 8 million barrels per day.

During 1999, according to the EIA, the US obtained 23% of its oil imports of 10.6 MM bbl/day, or 2.43 MM bbl/day, from the Persian Gulf Region.

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During 1999, OPEC supplied 29.4 million BOPD, or 39.7% of total worldwide supply of 73.9 million BOPD.

CRUDE OIL IN 1999 WAS USED FOR:

8.4 MM bbl/d (43%) for motor gasoline;
3.6 MM bbl/d (18%) distillate fuel;
1.7 MM bbl/d (9%) jet fuel;
840,000 bbl/d (5%) residual fuel;
5.0 MM bbl/d (26%) "other oils"

USA NATURAL GAS DEMAND (Trillion cubic feet)

1985	1999	2000
17.3	21.36	22.22

Natural gas presently supplies about 25% of the nation's primary domestic energy requirements.

Gas demand is skyrocketing, particularly as a "clean" fuel for electric power generation. Recent studies by the EIA, Gas Research Institute, and the National Petroleum Council (NPC), indicate annual demand will grow to as much as 32 TCF over the next 15 to 20 years. In its 1999 study, the National Petroleum Council projected annual demand to reach 29 TCF as early as 2010.

Security analysts at Dain Rauscher Wessels, Inc. estimate that more than 275 new gas-fired power plants are planned to begin operation by 2006. These new electric power plants are expected to consume an additional 8.5 TCF/year.

USA NATURAL GAS PRODUCTION (TCF)

1973	1983	1985	1990	1995	1999
22.6	16.8	17.2	17.8	18.6	18.7

USA NATURAL GAS RESERVES (TCF)

1970	1999
290	164

Proven gas reserves in the United States have dropped 43% during the past 30 years, from 290 TCF at year-end 1970, to only 164 TCF now. Approximately 14% of the nation's natural gas supply is presently imported from Canada. The NPC estimates that LNG imports will supply less than 1% of natural gas demand through 2015.

OIL AND GAS WELLS DRILLED

In 1999, there were only 20,770 oil and gas well completions in the United States. This is a pathetic shadow of the 70,000-85,000 wells drilled per year in the period 1980-1985, when we were able to actually increase deliverability and make significant new reserve additions beyond just replacing annual consumption.

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POTENTIAL UNDISCOVERED USA OIL AND GAS RESOURCES

The most recent assessment by the U.S. Geological Survey demonstrates that the petroleum and natural gas resource base is large enough to sustain an active domestic petroleum industry for many decades. The technically recoverable onshore U.S. resource base is estimated to be 110 billion barrels of oil and 1,015 trillion cubic feet of gas.

The National Petroleum Council (NPC) in its 1999 study concluded that the United States has a remaining gas resource base in the Lower 48 States of 1,466 TCF. It should be noted that only 157 TCF, or just 10% of the identified resource, is considered proven. There are an additional 313 TCF in Alaska; however, this gas is useless without a pipeline to the Lower 48 markets. The total identified USA gas resource, including Alaska, is a whopping 1,779 TCF. Even at 32 TCF/year consumption, there is more than a 50-year supply. Cumulative domestic production over the past hundred plus years is estimated to be about 890 TCF.

The 1999 NPC report concluded that the most prospective areas for major new discoveries, particularly natural gas, are on public lands in the Rocky Mountain sedimentary basins, offshore in the Gulf of Mexico, in the Eastern Gulf of Mexico, and on the Atlantic and Pacific OCS. Despite the huge potential of these areas, Federal law presently prohibits exploration on the Atlantic and Pacific OCS, and in the Eastern Gulf of Mexico. Access to much of the remaining resource potential of the Rocky Mountain basins is restricted or closed. A total of 213 TCF gas resources have been identified by the NPC in the areas that are closed and/or subject to severe access restrictions.

The total area of the U.S. Federal offshore, including Alaska, to the 200-mile economic limit, is about 2 billion acres. Only 2 percent has been leased. In its 1995 study, the Minerals Management Service assessed a mean undiscovered recoverable resource of 46 billion barrels of oil and 268 trillion cubic feet of natural gas in the Federal OCS. This is 2.5 times the offshore reserves found to date.

WORKING DRILLING RIGS

The number of drilling rigs working on a daily basis has decreased from over 4000 in 1982 to an average of only 623 in 1999.

USA REFINING CAPACITY

Since 1981, the number of operating refineries in the United States has declined 47% from 324 to 174, representing a loss of over 3.0 million bbls/day of capacity. Refinery utilization has increased from 69% in 1981 to 96% in 2000.

Refinery closings were caused by deregulation (elimination of price controls and allocations), and the cost to retrofit older refineries to meet current environmental regulations. There have been no new grass-roots refineries built in over a decade. According to the EIA' April, 2000 Energy Report, "financial, environmental, and legal considerations make it unlikely that new refineries will be built in the United States."

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CRUDE OIL PRICES

Crude oil prices over the past 10 years have consistently lagged the consumer price index inflator. The average price from January 1990 through August, 2000, has been $19.95. The price spiked over the CPI during the Persian Gulf War, briefly in late 1996-early 1997, and recently in 2000. Crude oil prices rose from an inflation adjusted 53-year low of $8.03/bbl in December, 1998 to an average price of $22.55/bbl in December, 1999.

GASOLINE PRICES

In an October, 2000 press release ExxonMobil said that it makes a profit of five cents on every gallon of gasoline it sells, while Federal and State Governments take an average of 40 cents in taxes for every gallon sold. The ExxonMobil press release went on to say:

"Since the end of World War I, inflation-adjusted gasoline prices have steadily declined, interrupted only by a few peaks and valleys. Through the end of World War II, when average real incomes for Americans were much lower than they are today, gasoline prices varied between $2.00 and $2.50 per gallon ($1999). The price then dropped steadily to about $1.50 per gallon before the oil shocks of the 1970s and early 1980s drove prices temporarily higher, peaking at over $2.50 in 1981. The lowest gas prices of the period occurred in 1998, when low crude prices drove gasoline near, and in some parts of the U.S. below, $1.00 per gallon. Prices have moved up sharply in 2000, but from a very low level and continue to be below historical levels.

The declining price of gasoline has contributed to the growth of our standard of living over the years. In 1966, the average American family spent each year a total of about $35,000 (in $1999), of which about three percent went for gasoline. Today, the average American family spends over $60,000 each year, with only two percent on gasoline. Over the same period, the vehicle fleet (cars, vans, light trucks and SUVs) increased from 91 million to over 200 million, and the average number of miles driven annually per vehicle rose from 9,500 in 1966 to almost 12,000 today. With vehicle efficiency improving from about 13.5 miles per gallon in 1966 to nearly 20 mpg today, the average cost of driving one mile has fallen from over 12 cents in 1966 to about six cents in 1999. Recent gasoline price increases have brought that cost back to only about seven cents per mile.

In its October, 2000 Energy Report, the EIA said that "Regular unleaded, self-service retail motor gasoline prices hit their highest monthly level ever, in nominal terms, averaging $1.63 per gallon in June. Still, in real terms (adjusted for inflation) that price was about 40 percent lower than the price experienced in March 1981.

Motor gasoline demand has increased 28% from 6.58 MM bbl/day in 1981 to 8.47 MM bbl/day, despite conservation efforts.

BALANCE OF TRADE DEFICIT

The largest component of the projected 2000 foreign trade deficit of $387 billion is imported crude oil and refined petroleum products. In 1973, at the time of the Arab Oil Embargo, the United States imported 35% of its petroleum requirements. That figure now stands at 56%.

The EIA estimated total 1999 oil imports at $66.9 billion. This year that bill will be significantly higher.

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INVESTMENT CONSIDERATIONS

According to the Financial Reporting System, the 23 largest producers reported an average return on assets of just 5.4% over the 12-year period from 1986 through 1997. During the past decade, the average oil industry return on capital employed has been only a meager 7-8% due to low commodity prices.

The December 1999 National Petroleum Council study concluded that the growth in natural gas demand will require funding of approximately $1.5 Trillion (in 1998 $). This includes $700 billion for operating expenses, and $658 billion dollars in upstream capital expenditures from 1998 through 2015. This latter figure includes all exploration, development, production, and gathering capital expenditures. In order to satisfy supply growth an increased annual average capital expenditure of $39 billion per year is required from 1999 through 2015, versus an average of $27 billion from 1991 through 1998. However, these needed levels of investment will take place only if investors have confidence that competitive rates of return will be earned.

REASONS FOR DECLINE IN DOMESTIC DELIVERABILITY AND RESERVES

1. Low and volatile commodity prices have discouraged investment.
2. Low return on petroleum investment compared with other economic sectors.
3. More attractive alternate investment opportunities for private capital (stock market).
4. Access denied to most prospective exploration areas on environmental grounds.
5. Onerous regulatory disincentives.
6. Tax disincentives.

ARCTIC NATIONAL WILDLIFE REFUGE (ANWR)

The AAPG believes that the 1002 area of the Arctic National Wildlife Refuge (ANWR), and the similar coastal plain area of the National Petroleum Reserve-Alaska (NPRA), should be opened to exploration and development. A study recently released by the United States Geological Survey (March, 1998) cites potential economically recoverable oil resources beneath the ANWR Coastal Zone 1002 Area of 5.7 to 16 billion barrels of crude oil, with a mean expected resource of 10.3 billion BO. Mean peak production rates of 1.0 to 1.35 million BOPD are expected. The 1002 Area represents only 8% of ANWR's 19 million acres. Less than 1 percent of the land within the 1002 area would be affected by petroleum exploration and development activities. Parts of the coastal plain of the NPRA, held back by the Bureau of Land Management (BLM) from the 1999 lease sale at the instruction of the Secretary of the Interior, contain an estimated minimum of 1.5 billion barrels.

The major objection to development of the Prudhoe Bay Field and Trans Alaska Pipeline was the potential threat of the development to Caribou migrations. According to the US Senate Committee on Energy and Natural Resources, the Prudhoe Bay herd, also known as the Central Arctic Herd has increased from 6,000 in 1978 to 19,700 in 2000. The caribou are not bothered by the petroleum development infrastructure – in fact they prefer it to the prospect of having their calves devoured by wolves.

Opponents of ANWR development say that it is not worth forever despoiling ANWR for a few months of oil supply. This is a specious argument that assumes that supply from all other sources ceases during the life of the ANWR reserves. According to Government studies, the

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2001 area of ANWR, could produce over 1.0 MMBO per day. Like the Prudhoe Bay area, production operations will likely run for more than 25 years, providing vital crude oil and natural gas for the nation's economy, significant employment in Alaska and in the Lower 48 from production operations and equipment supply, hundreds of millions of dollars of annual state and federal tax and royalty income, as well as a reduction in the outflow of funds for the purchase of imported crude oil.

During this year US Secretary of Energy Bill Richardson has repeatedly been on his hands and knees before OPEC producers to beg for production increases of initially 200,000 BOPD and then 800,000 BOPD. The current supply/demand balance is so precarious, that even the threat of a storm in the Gulf of Mexico causes oil and gas prices to shoot up momentarily. An incremental 1 million barrels of oil per day from ANWR for a sustained period of at least 10 years would make a huge difference in the supply side of the supply/demand equation.

During 1999, according to the EIA, the US obtained 23% of its oil imports of 10.6 MM bbl/day, or 2.43 MM bbl/day, from the Persian Gulf Region. If one were to use the same argument as the ANWR opponents about supply, development of potential ANWR reserves of 10+ billion barrels would eliminate 11 years of dependency on imports from the dangerously volatile Middle East.

The giant Alaskan Prudhoe Field went into production in 1977, and produced its 10 billionth barrel of crude oil in May, 2000. The field reached a regulated peak of 1.5 million barrels per day in 1979, and produced at this rate through 1988. Production is now in a steep decline.

This information was compiled by G. Warfield "Skip" Hobbs, 1999-2000 President of the AAPG Division of Professional Affairs. Please send any corrections and/or additions via e-mail to Skiphobbs@ammoniteresources.com.

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Scope ■ Resource Planning ■ Aquaculture ■ Agriculture ■ Environmental ■
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WORLDWIDE Technologies

John R Snell P E Ph D. — President

Feb. 1, 2001

Honorable Spencer Abraham,
Secretary of Energy,
White House,
Washington, D C 20270

2001-002956 Feb 5 A 9:43

Dear Spence;

May I first repeat my letter and Fax extending congratulations. There are ever so many more important things for you to do for the world as Secretary of Energy than you could have accomplished a one out of one hundred Senators. I feel it was God's will that you were moved in this important direction. Your eight years here can change many things for the best in the whole world. Although my field for the past 60 years has been in Environmental Engineering and not directly in Energy the two fields cross over in many ways and there are some thoughts which have been important in my mind for a long time, and I am pleased at this chance to pass some of them on to you for your consideration, and for the consideration of some of your best smart new advisors. My first six page document to you entitled "A Practical Plan to Tame Global Warming and Become More Energy Sustainable" outlines some key points which I hope will at least in minor ways help you place priorities on the hundreds of potential projects which are now, or have been, under consideration by the Department of Energy.

This paper does recommend under Paragraph "C" a project which was first initiated by DOE some years ago through R&D funding to the Snell Environmental Group which has great promise for helping to solve our Global Warming problems. We have a lot more information on this subject but I am enclosing only three at the moment, one a paper I presented at the DOE conference in Madison WI. in October 1998, two a short summary of my background and experience, and three a copy of my International experience entitled "Toward A Better World" 1997.(something to skim over)

In Paragraphs "4" and "5" I outline two other areas which I feel could be helpful in suggesting innovative new programs but due to each needing quite a bit more work I will be forwarding these two additional papers to you in another month. I plan to be away in Florida and Calif. until Feb. 20th. I would be very pleased if you would see fit to pass my thoughts on to one or more of your many key staff so that I will not have to bother you personally with these technical matters.

Sincerely Yours

John R. Snell

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A PRACTICAL PLAN TO TAME GLOBAL WARMING AND BECOME MORE ENERGY SUSTAINABLE

INTRODUCTION

In the past decade it has become more and more clear that Global Warming in not only a real phenomenon but a very dangerous one to go unchecked. We now know that unless we tame Global Warming rather quickly we will likely have world wide weather disruptions beyond which our civilization can tolerate. Since 1985 we have had five serious worldwide meetings to try to determine the seriousness of the situation and how to find an economical and practical solution which our various countries will agree on and are willing to carry out. To date no such agreeable plan has emerged and as each year passes our problems grow worse and may well become too great for a practical solution.

It is the purpose of this paper to re-emphasize the seriousness of the problem and then suggest what is felt to be a practical, workable short term and longer term solutions . The plan essentially is to do six things 1) With all haste move quickly to reduce the amount of green house gases being emitted with all haste, at least in every place where it can be done in a practical and not too expensive way, and in a way which will not disrupt our needed total energy source. 2) While keeping our best renewable energy options open, undertake an all out joint venture R&D program even more intense than our Space Race. The need for success here is far greater than with Space and by all pulling together our chance of success is virtually assured. 3) At the end of two or at the most three years of intense R&D with the several most promising renewable energy sources, (Solar Power, solar PV, Wind, and Geothermal,) as well as economical ways to store the energy, and ways to conserve energy and , with both on a small and large scale, it is time for mass construction of one or more of these renewable sources. Detailed preplanning will be needed as to where it should go and how it should fit in on down the line. One or more systems might at that time be delayed for yet another year or so if the final stages of an R&D break through is in progress, or other equally important engineering, or economic reasons. 4) With the aid of perhaps ten of the best energy consulting firms working in collaboration with national and regional energy experts, prepare the best possible global feasibility study as to how the job of completely converting to renewable energy sources might best be done on a rapid schedule and a reasonable cost and then determine where the financing should rightfully come from. 5) Implement the agreed upon global master plan on a tight schedule, yet keeping it open to minor approved changes by an acceptable team of expert consultants based upon real changes in technology or economics etc. which would warrant a change. All during these periods, detailed monitoring of the global and regional situations would be made for general review by all concerned. 6) Our long term energy master plan needs to establish the very best plan for as long a use as possible for the remaining unmined fossil fuels, all without aggravating the problem of Global Warming. Although aviation use and chemical manufacture use would likely be priority uses, still near future substitutes must be considered as options. Particularly for the most critical uses, considerations of security and foreign exchange may need to be considered.

A BRIEF HISTORY LEADING INTO THE CARBON ENERGY CRISIS.

(Ref. #1-11) As early as 750,000 years ago man lived in caves and cooked and warmed himself by burning wood Although wood was 90% carbon the amounts

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converted into the green house gas carbon dioxide was negligible. It wasn't until really the onset of the industrial revolution, brought on by the discovery of coal and the invention of the steam engine, that appreciable increases of carbon dioxide took place in the atmosphere. The discovery of crude oil and its refinement into gasoline and diesel etc. further invigorated the industrial revolution, and with the invention of the internal combustion engine as well as the automobile and the airplane all but caused an explosion in the use of fossil fuels. Natural gas discovery and wide use further invigorated the whole industrial process almost to a point out of control. Although the ratio of carbon to Hydrogen molecules was less in these two energy sources each soon grew to be used in excessive quantities and thus added greatly to the carbon dioxide concentration in the atmosphere. With the growth of hydropower and nuclear power after mid-century there was a real but insufficient move away from fossil fuels, but not enough to lower the actual quantities of green house gases being emanated. Each of these two large energy sources have lost favor with the public due to environmental or safety considerations, however, until we have securely moved over to the renewable energy era and have truly tamed Global Warming, we should give renewed open minded study to the further at least temporary use of each. These options are discussed in greater detail elsewhere in this paper.

Of necessity in the last two decades considerable interest has grown in renewable fuels beyond hydropower including, wind, biomas, solar thermal power, solarPV, geothermal and to a lessor degree others, such as wave or tidal energy and the temperature differences of deep and shallow parts of the ocean. Most renewable energy sources have intermittent times for varying degrees of energy production and depend on some form of storage of the energy, or a workable efficient way to coordinate the energy peaks from the renewable source into the energy requirements of the entire grid. Also most of these renewable sources of energy have other limitations such as seasonal, good and bad geographical locations and the relative closeness of these ideal locations to the areas of real need for the power. Also, each renewable energy has present and potentially lower achievable costs, as well as dependability, and nearness to adequate storage. There are other considerations such as the need for using agricultural land for energy production instead of raising food, or in various ways creating environmental problems.

COMMENTS ON IMPROVING THE PRODUCTION AND USE OF SELECTED TYPES OF RENEWABLE ENERGY

A) PHOTOVOLTIC POWER AND WIND POWER

There are a number of groups which have undertaken considerable R&D on various aspects of photovoltic power and it would appear that perhaps the latest will bring the overall costs to be truly competitive with Wind Power. When the end power desired is Electric energy there are advantages PVPower over producing power by concentrating solar heat. o With PVPower one can generate as much power per hector without the complexities of reflectors and concentrators. There is also simplicity and no moving parts. It is a relatively simple matter to convert the low voltage DC current produces to higher voltage AC. current. When it is important to store the energy, there could be many advantages of first converting it to hydrogen (and oxygen) where it could be used in a conventional power plant normally run on natural gas or, in other cases it could be added to natural gas lines in an efficient and equitable way. Or, should we wish to store very

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large amounts of energy, the hydrogen gas could be transported to a convenient empty or partially empty natural gas field and be drawn back out for use at a later date. As we get into more and more renewable energy and we need to maintain flexibility and maximum efficiency and storage ability a special system could be worked out for optimum use of many of the existing empty or partially empty natural gas fields and or some of the abandoned salt mines or abandoned crude oil wells. Computer registration of the pertinent details and even the management of each storage area would not be too complex and would give almost an infinite storage capacity. Even the types and strengths of various types of normally used gases could be fully considered, such as Hydrogen, Methane, land fill gas, natural gas etc. and stored appropriately.

As fuel cells are expected to be practical and efficient in many sizes it would be rather easy to recover the hydrogen gas back as electricity. What advantages have been listed concerning Photovoltic energy would often apply to wind power as well. By making a greater use or storage of hydrogen in this system, wind power presents much greater flexibility and efficiency potentials than when hydrogen is not made and stored.

For large scale and efficient storage of energy we can look to Peaking at a hydro electric plant especially when we are attempting to add quick low cost power for short periods of time, such as daily peaks. Hydro peaking has a efficiency range of say 70-80%. To compress air or another gas into a confined space and recover it as energy may be used to a degree but with much less efficiency.

A discussion of renewable energy storage for the future automobile needs a further crash R&D program, especially when hydrogen becomes plentiful and fuel cells are perfected. R&D needs to study and compare the compression of hydrogen in tanks, liquid hydrogen at ultra low temperature in highly insulated tanks, conversion to hydrides or some equivalent, or through some innovative chemical means produce from hydrogen an end product with properties like propane which can be stored as a liquid at ambient temperature and low pressure. There is real need for a breakthrough through an R&D program. It may well be that, with hydrogen becoming plentiful and low in cost, the breakthrough would come in variations in the use and storage of hydrogen instead of in producing an ideal battery.

B) FUEL CELLS

Although much work has been accomplished with fuel cells in the space program, and to a degree since, it may now become a truly efficient key in putting together a full blown renewable energy program. It is suggested that the R&D, manufacturing and use program be given a great deal of attention by many different groups. The improved fuel cell could become the cornerstone and workhorse of the new renewable energy program. Besides using it with only hydrogen, R&D is needed on using it with methane and other gases and or mixtures of gasses. The many possibilities in the conversion of methane to a more useable form should have our full attention for there are so many natural wastes from which methane can easily and inexpensively be made. There are claims that methane can economically be converted into methanol where it can be used with ease in automobiles. See the next paragraph for an innovative rapid low cost way of producing methane from presalvaged preshredded municipal refuse which was initially funded by DOE with a grant to the Snell Environmental Group.

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C) RAPID LOW COST METHANE PRODUCTION FROM MUNICIPAL AND AGRICULTURAL WASTES AND OR PRODUCTS

During the past two decades the DOE has places a lot of emphasis on the production and use of Methanol. They have supported a lot of programs and R&D projects and have sponsored numerous national and regional programs encouraging its production and use. The writer presented a paper at the Bioenergy '98 symposium October 4-8,1998 in Madison Wisconsin, volume I page 687-695 Ref. # 10. May we summarize some of the significant points of this paper and what benefits could accrue should the DOE renew its interest at this time and aid in securing the needed funding to carry on the R&D to its natural conclusion. There is on hand already a draft request for funds where Mich. State University would build and experiment with a small pilot plant which would tidy up the already very promising bench scale DOE supported work accomplished earlier by The Snell Environmental Group. Here are a few facts and figures to show the potential of further work to expand the initial DOE funded R&D.

1) With each U S citizen producing about 5 pounds of municipal waste per day we are talking about 250,000,000 tons per year most of which goes into rather poorly designed Land fills. 2) Today's Landfills are doubly flawed from the point of view of either recovering energy or reducing green house gases and are causing much global warming. 3) Today there are very few landfills employing the collection and use of methane gas but where it is done there are reported excellent profits from generating electricity and selling it to the utilities. 4) The facts are that under most present land fill designs it takes about 50 years for most of the methane gas to be generated. Also when suction collection pipes are installed to recover the energy, still about half of the gas generated leaks out to the atmosphere. 5) On a per cubic foot basis methane produces about 21 times as much global warming as does carbon dioxide. 6) It is estimated that if we were to quickly redesign , collect, and generate electricity, or otherwise efficiently use the methane emanating from our municipal solid wastes we could do essentially two things A) Increase the national electric energy production by perhaps 6-8% and B) Reduce our present dangerous contribution to global warming by as much as 15-25% Both these figures need further verification but are in the ball park. 7) The R&D work already completed indicates that instead of taking 50 years to generate 90+% of the theoretical methane gas obtainable from presalvaged, preshredded municipal solid wastes it can be extracted in less than 2 months. 8) The stabilized organic residue remaining from this process is like compost, rich in lignin and nutrients, and can best be utilized by transferring it to agricultural lands. 9) This procedure would have the effect of cutting land fill residues to less than ten percent and eliminating the present grave long term dangers of ground water pollution 10) Modifications of the process can be applied to existing land fills and greatly increase the speed and efficiency of land fill gas collection. 11) The same basic process may be applicable to the low cost efficient recovery of the energy in the form of methane gas from all kinds of agricultural wastes and or gathered grasses of wood residue products normally thought of as possibly being used to make methanol. The cost of accomplishing this is estimated to be very low and the methane could either be fed into the overall renewable energy program as methane or it could first be converted to methanol as described in the literature. 12) The potential benefits described above as they

would apply to the US conditions, if also studied broadly could apply even more to the developing countries of the world which are producing about half as much municipal waste per capita as we are. Their crudely constructed waste dumps have all the Global Warming dangers built into them that our own landfills do. In my contact with key environmental engineers in both China and India there is a strong interest in the potential which could come out of continuing with the R&D already accomplished. There has been willingness to proceed using their funds on a parallel basis with ours as our own R&D moves forward. In this way much good could come from running the same kind of experiments on somewhat different types of municipal refuse at the same time. Also by involving them we could magnify our ability to control global warming quickly and inexpensively, in fact perhaps even while making a profit. 13) It is suggested that DOE assist in obtaining funding using Michigan State University Department of Environmental Engineering as the research entity. They have the key personnel and facilities and should be able to formalize a fair research contract rather quickly.

4) COMBINING INNOVATIVE HYDRA POWER WITH HYDRA-PEAKING POWER WHILE TRANSPORTING SURPLUS RIVER WATER TO IRRIGATE ARRID AREAS

On a national basis we have a number of situations which would fit into this category of producing renewable energy in the area of hydraulic power but at the same time accomplishing other, perhaps even more important benefits, and doing so at a bargain price. This is an area where the writer has had some very interesting background experience. Some years ago the Snell Environmental Group, because of its rather extensive experience in lake restoration work, was asked to make a prefeasibility study for a chain of lakes and dams for about 800 miles distance, following selected clean rivers in Michigan, and connecting several of the Great Lakes. The proponents of this proposed project known as the Trans-Michigan Waterway, had many good points but never reached the stage of a full fledged feasibility study due to the limited financing of the clients. During the course of the investigation many important things were learned. Although it was given support by the Michigan Senate it was opposed by the Michigan Department of Natural Resources, mainly because they did not wish such lengths of public rivers to come into private control and the project gradually died on the vine.

During the pre-feasibility study period a number of national technical articles and an extensive promotion brochure were produced along with a professional 30 minute color film. Today there is still a strong interest in a project of this kind but one which might be cut down in size, however no revised Michigan project is being suggested. What is being suggested is that we take full advantage of all the things we learned in the initial study of the proposed Trans- Michigan Waterway made 30 years ago but under new and important conditions which are quite different and in fact quite urgent today as our world population exceeds six billion and our ability to grow sufficient food to feed everyone becomes more difficult as each decade passes. Let us take the well known example of the Texas Panhandle which has been irrigated with geologic ground water for perhaps fifty years and has thus been very productive. However ground water has fallen from about 50 feet to over 1000 feet and may soon be exhausted. For Panhandle agriculture to revert back to dry land farming would mean about a 90% cut in crops from the area. With an abundance of surplus water in either the Missouri or the Mississippi River which could be

inexpensively transported to the Panhandle employing technologies studied with the proposed TMW we can readily recommend a full fledged feasibility study of this specific project. The project proposed is too complex to present here in detail, hence this proposed study had been written up as a separate project for DOE to consider funding. The results of such a specific feasibility study would, in general, be applicable to numerous other projects World wide, which if added up, could have a marked influence on future ways to move excess river waters to arrid regions for agricultural irrigation and make a real impact on the availability of future food for the hungry.

5) PRESENT DAY OPEN MINDED FEASIBILITY STUDY FOR BUILDING NEW NUCLEAR POWER PLANTS

Although nuclear power is not included in the definition of renewable energy it falls in a special category in that it is not a carbon based fuel which produces a waste causing global warming. In our interim move from where we are to a future program adequately free from carbon dioxide production we have need for making some fast power additions without increasing the greenhouse gasses. There are also thoughts, if tests work out, which might put a whole new and better approach to the treatment and disposal of nuclear wastes, including a very good chance that along the way some of them might be safely and economically used.

Here again this proposed feasibility study is too complex to include as part of this project write-up and has therefore been written up as a separate project. Although the feasibility study should include many new and different technologies the writer here is suggesting only a very limited area of study namely a potentially useful new way of treating and disposing of the wastes and also applying needed new R&D toward the possible use of much of the active ingredients in our discarded stockpile of nuclear bombs and make it over into a safe and a much lower cost power rods for using in the new nuclear power plants.

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9-11) DOE sponsored conference "Bioenergy -'98"- Madison Wi. 1998
9) Landfill Gas-To-Energy: Devel. Projects Under Different Environments P659-Ed Coe
10) Global Warming may be Significantly curbed by Controlling methane from Landfills p 687--John R. Snell
11) Energy Recovery from Solid Wastes p715 J. Longworth, Z Samani, & A Hanson

"GLOBAL WARMING MAY BE SIGNIFICANTLY CURBED BY CONTROLLING METHANE FROM LANDFILLS"

By Dr. John R. Snell, Worldwide Technologies, 918 Rosewood, East Lansing MI 48823

Presented Oct 4-5 1998 For the BioEnergy Conference, Madison WI

ABSTRACT

Global Warming is considered to be real and dangerous by the vast majority of experts in the field. Almost everyone at the Dec.1997 Kyoto Conference was convinced of the importance of taking drastic steps in reducing the production of carbon dioxide from our industry. What was not brought out was the fact that the methane produced mainly by the uncontrolled emission of gas from the landfills of the world is significantly a part the cause for Global Warming. This is true because a cubic meter of methane gas is 21 times more potent in creating the earth's warming than is a cubic meter of carbon dioxide. Thus, each gas is quite responsible.

To cut way back on the carbon dioxide would cost industry literally trillions of dollars, whereas if the methane from landfills is collected and used to generate electricity, that can be done quite inexpensively and profitably. A new technology permits us to extract over 90% of the methane from pre-salvaged and pre-shredded refuse in 2-3 months, whereas it takes 50-100 years in a landfill This new technology of methane production permits 5-8 % more electricity to be generated

Key Words: Global warming, landfill gas, high rate methane gas, recycling organic to farm

INTRODUCTION

There is a close and strong economic relationship between the electrical industry and the solids wastes industry especially in solving "Global Warming" . Solid Waste is also an added source of low cost methane fuel perhaps best used to make electricity. This paper has significant meaning for the producers of electric energy around the world as well as for the Solid Waste Industry. It is a "Wake up Call" which we should all give high priority.

Electric generation is believed by most people to be the greatest contributor to carbon dioxide production and hence to global warming. The cost of controlling this warming is put in the hundreds of billions of dollars per year and urgently needs innovative solutions. This new technology provides the key for the answer. We can produce 5-8% more electricity by using the methane generated from solid wastes. Instead of taking 50-100 years to produce the methane gas from a sanitary landfill it can be produced inexpensively in 2-3 months. If the municipal waste is pre-salvaged and pre-shredded the stabilized residue can be used on farms to help grow more food and use less fertilizer.

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GLOBAL WARMING AS VIEWED BY THE EXPERTS

1) In the past 150,000 years the carbon dioxide in the atmosphere has hovered around 200 (PPM). In the last 100 years this concentration has risen to about 360 PPM and continues to rise rapidly. There are now efforts to control it below 450 PPM

2) As the carbon dioxide rises so has world temperature. From 1880 to 1950, the rate of temperature rise has been about 2.2^{0}F/ 100 years. However, in the past thirty years the rise per 100 years is 3.5^{0}F

3) We know the oceans are rising, The ultimate endpoint would be for the ice caps at both poles, 8,000 feet thick, to melt, and the oceans to rise 300 feet inundating many cities. Realistic expectations are much less but still very damaging.

4) Weather-related natural disasters are blamed on the rise in world temperature. During the 1980's insurance companies reported a 17 billion dollar loss. However, since 1990 these companies have paid out 57 billion-- An 8 fold increase. In the last two years damages are much worse.

5) There have been many top level conferences to discuss how these expensive problems can be solved economically. The findings in Rio lead to those in Berlin in July 1997 it continued in New York and in Dec 1997 in Kyoto gave most nations difficult and expensive goals to attain

6) Taxing the use of carbon has been promoted. The numbers are eye opening. "A levy of $200 per ton of fossil fuel" and would raise $1,200 billion annually.

7) Alternate economic renewable energy sources are distant. This new technology may help to provide the valuable time needed for answers. .

RELATIONSHIP OF THE NEW TECHNOLOGY TO OUR DILEMMAS, ESPECIALLY TO GLOBAL WARMING.

1. The new technology is a real breakthrough in the rapidity of methane production from municipal solid wastes. Organic breakdown has been reduced from 50-100 years to 2-3 months.

2. The new technology should provide the present landfills with valuable added control for gas production and stabilization of the organic.

3. It should eliminate the "ticking pollution time bomb", and billions to be spent later on groundwater pollution

4. Global warming caused by the carbon dioxide from the electrical industry may be no more than the global warming caused by the methane from landfills. A volume of methane has 21 times the capability of warming the globe as a volume of carbon dioxide.5. The electrical

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industry working with the Solid Wastes industry can reduce global warming significantly. Alternate energy sources of methane are converted to electricity. It is possible to decrease global warming by as much as 40-50% which should save trillions of dollars, & buy time needed.

COOPERATIVE RESEARCH FOR THE ELECTRICAL AND THE SOLID WASTE INDUSTRIES

For every dollar spent on R&D in the Solid Wastes field there are over $100 spent in the electric field. It would represent not an increase in their R&D, but a decrease . . Fig. I shows a sketch of the pilot plant Michigan Biotechnology Institute (MBI) will be working with on a cooperative basis.

This new method, however, would generate about twice as much methane gas and would conserve all the gas generated instead of wasting over half to the atmosphere. The residue left would be much like compost ideal for agriculture.

About ten years ago, through a US Department of Energy (DOE) grant to the Snell Environmental Group, it was discovered that refuse breakdown can easily be speeded up from 50-100 years to 2-3 months and this can be done in a low cost way. The gas generated from a ton of refuse is worth about $30, many times the cost of production We can produce about 227 cu. meters (8,000 cu feet) of methane gas from each ton of refuse.

A large scale pilot plant is estimated to cost $20,000 US and will be Michigan Biotechnology Institute's (MBI's) next main effort (see fig. 1). This will be followed by a demonstration plant, supported in part by the government.

THE ESSENCE OF THE PROCESS

Two negatives which are finally being realized regarding the standard landfill technology are as follows:

1) The methane gas given off over a 50-100 year period generally escapes to the atmosphere instead of being held and used to make electricity thus converting the methane gas to carbon dioxide. In so doing, it adversely affects the global warming problem by a factor of about 21 times more than CO2

2) Today's technology of landfills is to surround the fill, both top and bottom, with clay, and or plastic liners so as to keep out moisture.

Without moisture, effective biodegradation is delayed many years. There is an inevitable breakdown of the protective liners and this then becomes like a "pollution bomb" for the groundwater. Now we can stabilize the material well ahead of the time when groundwater pollution will ultimately occur.

Pre-treatment for this new and unique process necessitates recycling and pre-shredding. The

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collection trucks would deposit their loads on a large open floor where some quick sorting of large materials could take place.

The material winds up separated and clean at a fraction of the cost of the normal curb separation systems. The organic fraction next continues to a two stage shredder handling large items in the primary stage, and in the secondary stage shredding finely enough to be the size of harmless sand. The shredded material leaving this facility is then transported in 38 cu. meter dump trucks, and taken to a mini-landfill. Fig. 2&3.

There are essentially three small lined, landfill type cells, each designed to hold three months of material. Cell #1 is first filled and the material lightly compacted in place Next the perforated plastic pipes are placed for distributing a liquid rich in methane-producing bacteria, then the cell is covered with tightly fitting plastic. The deliveries of shredded refuse then goes to cell #2 while cell #1 is put into active gas producing operation, essentially by slowly circulating this seeding liquid from liquid cell #4 (secondary digestion)

Generally this gas is about 1/3 carbon dioxide and 2/3 methane. The moist material is used on agricultural fields.. The economics of this moisture held by the organic and reduction of erosion are very important. Adequate organic in the fields also greatly reduces the chemical fertilizer needed for a comparable value crop.

This proposed process reduces the ultimate landfill by 80-90%. Most of the material reaching the remaining fill would be "hard fill" & pollution free, and in demand to fill low lying areas. No "ticking time-bomb" waiting to pollute the ground water.

This high rate methane producing technology has several other potential uses.
A) It can control the rate of methane production in existing landfills. Also a lot more gas can be produced.
B) Landfills can be rather easily and inexpensively stabilized so as to eliminate the ultimate groundwater pollution.

Whoever is interested in this new technology should be in touch with Snell or MBI. Favorable arrangements can be extended.

The refuse in most of Asia and even Mexico and much of Latin America are essentially different and about half the volume per capita of that found in the United States. There would be great advantage by starting up an overseas pilot plant, exchanging technical results. The first thing needing to be done with this different type of refuse in each country is to try out this new and unique technology on it..

We need to capture the tremendous potential of extracting and utilizing the energy in this vast renewable resource. The best way of handling the stabilized material, is to use it on the agricultural fields using this unique "magic" . Let us make the most of it.

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PARTIAL LIST OF USEFUL REFERENCES

Note: References 6-14 are taken from the World Watch Institute Monthly Papers, Washington, DC The numbers and dates are given for each paper.

1 Sep 17-19, 1996 A Novel Process for Municipal Solid Waste Utilization by Accelerated Landfill Gas Generation by John R. Snell Power-Gen '96 New Delhi, India.

2 Dec 5th 1996 A Novel Process for Municipal Solid Waste Utilization by Accelerated Land Fill Gas Generation by John R. Snell at the Power-Gen '96 International Conference, Orlando, Fla.

3 Sep. 1997 A Unique Way to Rapidly Produce Methane From Refuse Landfills Which Can Be A Solution To The Electrical Industry Dilemma As it Affects Global Warming by John R. Snell at the Power-Gen '97 International Conference, Singapore

4 April 26-28,1998 A Unique Way to Rapidly Produce Methane From Municipal Refuse & Landfills, Which Can Aid In The Solution of Global Warming by John R. Snell Division of Enviro. Engr. Div. of Amer Soc. of Mechanical Engineers, Ft. Lauderdale Fl.

5 1996 "State of the World" by World Watch Institute

6 76 Apr.1987 Mining Urban Wastes, The Potential for Recycling

7 81 Jan.1988 Renewable Energy Today's Contribution Tomorrow's Promise

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9 91 Oct.1989 Slowing Global Warming: A Worldwide Strategy

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11 117 Dec.1993 Saving the Forests: What will it Take ?

12 119 June 1994 Powering the Future: Blueprint for a Sustainable Electric Industry

13 126 July 1995 Partnership for the Planet An Environmental Agenda for the United Nations

14 130 June 1996 Climate of Hope: New Strategies for Stabilizing the World's Atmosphere

15 Dec.1990 Can We Afford to Waste Municipal Wastes? By Byrom Lees, National Society for Clean Air and Environmental Protection

16 Dec 1979 A Warming World by Dr. Michael B. McElroy, Harvard Magazine

17 Aug. 18, 1997 Is It El Nino of The Century? by J. M. Nash Time Magazine

18 Aug. 5, 1997 Industries Begin to Rethink Issues of Global Warming by W. K. Steven's New York Times

19 Dec 1, 1997 Twelve Page Write-up on Global Warming New York Times

20 1997 Landfill Bioreactor Design and Operation by D. R. Reinhart and T. G. Townsend

21 1997 Engineering Response to Global Climate Change. Edited by Robert G. Watts, Lewis Publishers(Excellent.65 authors)

22 Sep 97 "Toward a Better World" by John R. Snell Winepress $18.95 call 1-800-917 BOOK (for a professional discount send author directly only $ 10 postpaid)

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Figure 1
Small Scale Pilot Testing
High Solids Digestion System
(Unsubmerged Configuration)

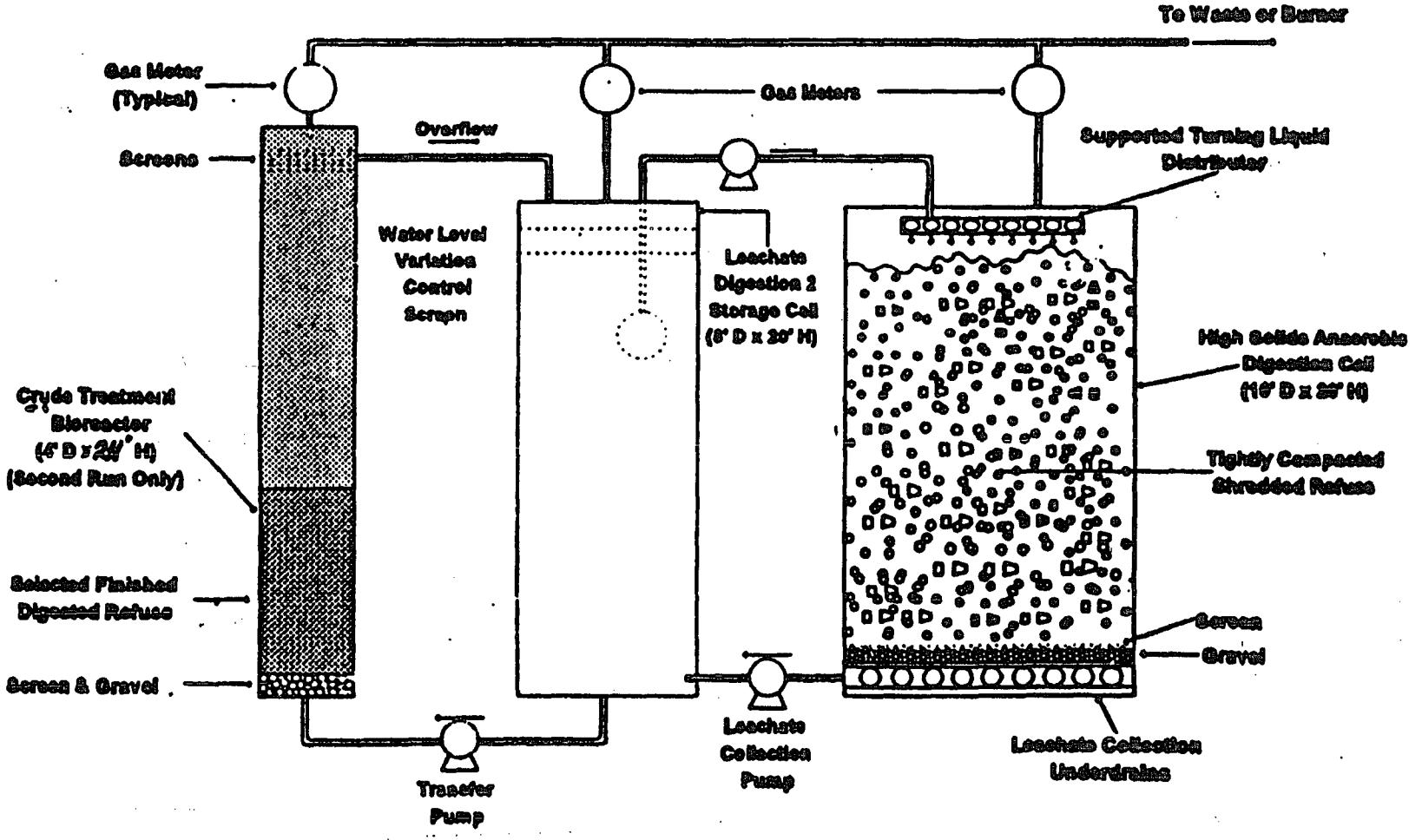

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Figure 2
Full Scale Digestion and Leachate Storage Cell Configuration, Small City
(Trickel Down in Disters)

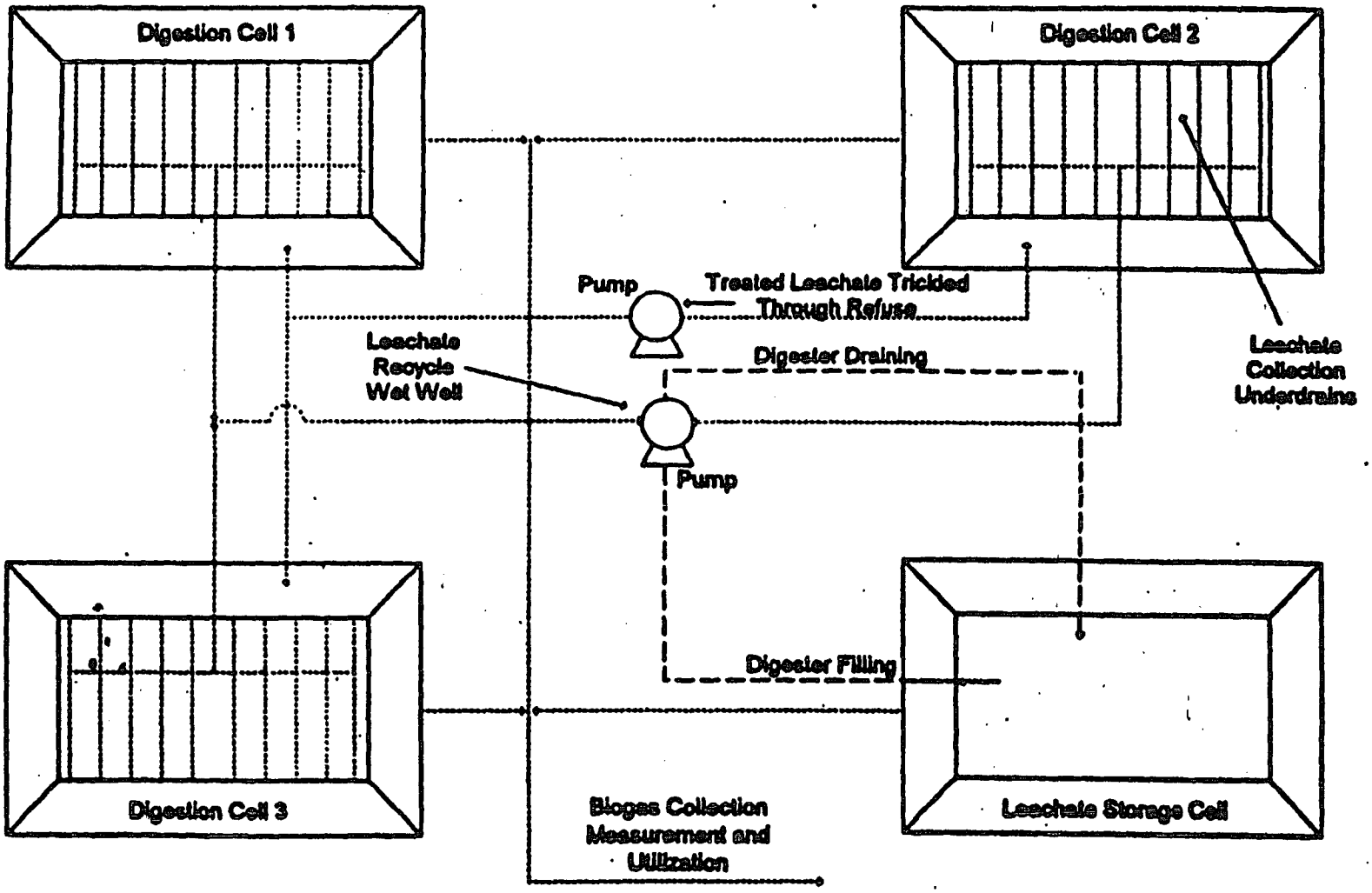

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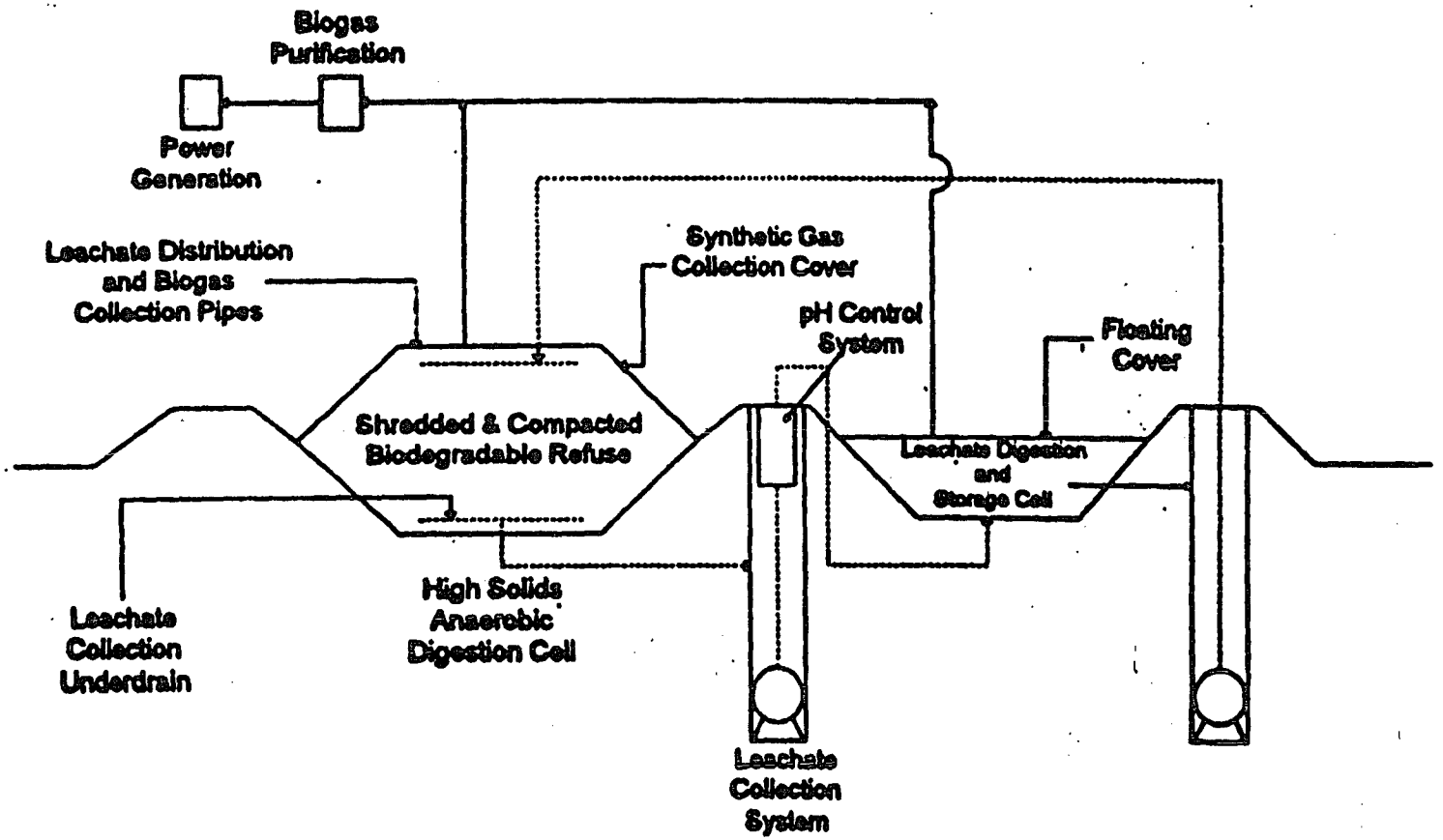
Figure 3.
High Solids Anaerobic Digestion and Leachate Storage Cell



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JOHN R. SNELL D S , P E ——PRESIDENT
WORLDWIDE TECHNOLOGIES

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SUMMARY RESUME 1955- PRESENT

Pres. & C E O Snell Environmental Group #	1955-1980
Char. of Bd. and Specialty Consultant S E G	1980-1985
Pres. Worldwide Technologies	1980- Present
Pres. & C E O Caribbean Development Corp.	1980-1993
Pres. & C E O General Shrimp Ltd	1980-1993
Director and Ch. of Bd. Bootstrap International	1980- Present

Note: Before 1972 firm was called Michigan Assoc. & John R. Snell Engineers Inc.

JOHN R.SNELL
1997

EDUCATION

B S	Civil Eng.	Vanderbilt Univ.	1934
M S	Civil & Sanitary Engr.	Univ. of Illinois	1936
D S	Sanitary Engr.	Harvard Univ.	1938

REGISTRATION (Professional Engineer)
At Present Michigan, Ohio, Indiana
Formerly Also in Mass., Illinois, Wisconsin, New York, Louisiana, Texas, Florida, Idaho, Oregon, Penna., & Ontario

HONORS & AWARDS
Tau Beta Pi & Chi Epsilon
H. P. Eddy Medal for Noteworthy Research in Anaerobic Digestion
Listed in Who's Who in America, Who's Who in the World plus four others.
Life Member in four Engineering Societies
Rotarian, Lansing, Mi.

PROFESSIONAL PARTICIPATION
Fellow & Life Mem., Amer. Society of Civil Engr.
Diplomat of Amer. Academy of Environmental Engr.
Past Dir. National Consulting Engr. Council
Past Pres. Consulting Engrs.. Assoc. of Mich.
Ch. of Bd. of Bootstrap International
Life Member The Water Environment Federation
Past member ten other engineering societies

MAJOR AREAS OF SPECIALTY
Solid waste processing, recycling & utilization including composting and methane generation.--Research and Development with the environment, energy, refuse, and

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construction. Snell designed, and supervised construction of the first four Sanitary Landfills East of the Mississippi.

1940 to 1942 Design Engineer for sanitary engineering projects for Metcalf and Eddy; Fay, Spofford and Thorndyke; and Stone and Webster, all of Boston MA. At M&E also did R&D on the anaerobic digestion of TNT wastes.

1039 to 1940; Water Supply Engr. for Federal Public Works Dept. of Venezuela, S. A.

1935 to 1938; Three years of graduate study at the Univ. of Illinois and Harvard.. At Illinois ran the San. Engr. Experiment Station for the summer of 1936. At Harvard ran research for the Harvard School of Public Health during the summer of 1937

Wrote Doctor of Science,(D S) thesis on the Anaerobic Digestion of Undiluted Human Excreta.

1934 to 1935; Instructor in Civil Engineering at Hangchow University., China

TECHNICAL PUBLICATIONS

Author of over 65 technical articles(List available) including five in the last 18 months on the inter-relation of the solid waste industry and the electrical industry as they effect Global Warming. Coo-author of two books A} "Refuse Disposal Practice" for the American Public Works Assoc. and B} 12 sections in a three volume Clinton Press publication entitled "Environmental Engineering Handbook", 1975. Author of a 250 page autobiography 'Toward a Better World" 1997 WinePress Mukilten, WA Published in Chinese in 1998

EXPERIENCE IN BELIZE WITH BOOTSTRAP INTERNATIONAL, GENERAL SHRIMP LTD, AND CARIBBEAN DEVELOPMENT CORP. 1980 TO 1993

In 1977 Snell purchased 8,700 prime acres of agr. land with two large rivers and three miles of sea frontage in southern Belize, C.A. After limited agricultural experience on the property, divided 2,500 acres into plots for 50 small farmers to be used use without downpayment. About half the acreage became active before the remaining land was sold to STARICH Inc, a large aquaculture firm from Alabama. About 400 acres are still active.

About 2,000 acres were acquired by General Shrimp Ltd.& they built 270 acres of grow out ponds, a hatchery, and a processing plant, all to support the Bootstrap program. They built and operated the first and largest Shrimp Farm in Belize. In 1993 it was sold to STARICH on a stock trade, including a total of 8,000 acres, and the remaining assets. In the last four years STARICH has expanded the operation tenfold and is raising Shrimp , Lobster, Talapia, and redfish. They plan to go public about the year 2,000.

SNELL'S EXPERIENCE WITH WORLDWIDE TECHNOLOGIES 1980 TO PRESENT

Expert witness on an $80 million ground water pollution case by land fill under NYC Att. Study for Buenos Aires, Arg.. on the treatment, transport, and agr. utilization of sludge Consulting for Mich. Biotechnology Institute (M B I) on a number of their R&D projects on composting and anaerobic digestion, including the high rate generation of methane on the Municipal Refuse Project. Aiding Xiaogon City, China, in design of idealized refuse treatment and utilization project. Assisted STARICH Inc. in their aquaculture rapid expansion with ponds, pump stations, and pollution abatement during operations. Wrote five technical papers on the inter-relation of the Solid Waste Industry and Electric Industry and their relative effect on Global Warming, and how to solve the problem.

Continuation of Typical Technical Articles By John R. Snell to 1998

47 "The Problem" Apr 29, 1965 National Academy of Sciences, National Research Council, Committee on Pollution, Wash. D.C. Land Sub-Panel by John R. Snell
48. "Dredging Restores Dying Inland lakes" Oct 1977 World Dredging & Marine Construction Magazine, John R. Snell
49 " New Approaches to Land Disposal of Sludge" June 1977 49th Annual Con. of Water Pollution Control Assoc. of Penn. by John R. Snell
50 "Common Sense Thinking About Biogas and Composting A third Kind of Alternative for Solid Waste Disposal" May 1980 Unpublished
51 " Designing Sludge Composting Facilities" (Fundamentals, Experience, & Common Sense) Feb. 1979 Sludge Magazine by John R. Snell
52 " Rapid Methane Generation from Solid Wastes" Oct 8th, 1984 International Congress on Technology & Technical Exchange By John R. Snell & Michael Goergen
53 " Environmental Engineer Dedicates Life to Health, and Natural & Sustainable Agriculture" Oct 1992 Shanghai American School Reunion Kansas City by J. R. Snell
54. " Its Tine to Apply Common Sense to the Environment" 1995 Unpublished J.R.Snell
55. " Worthy, Unique, Low-cost Solid Waste Disposal Options, with Special Emphasis on Anaerobic Digestion" 4th International Symposium on Anaerobic Digestion 11-15 Nov. 1995 Guangzhou, P.R.C. J. R. Snell
56. "How to Convert Manure Problems into a Profit." Unpublished J. R. Snell 1988
57. "Worthy, Unique, and Low Cost Solid Waste Disposal Options" June 25, 1985 Waste Disposal Seminar Marco Beach John R. Snell
58. "Sludge Treatment, Transport, and Utilization Study For the Three Waste Water Plants Of Aguas Argentina, Buenos Aires, Argentina, S.A. 200 page study in two volumes Sep 1995 by John R. Snell
59. "A Novel Process for Municipal Solid Waste Utilization by Accelerated Land Fill Gas Generation." Sep 17-19 1996 Power-Gen. '96 Asia Conference in New Delhi, India by J.R. Snell
60. "Recycling treated Organic Wastes as a Large Fraction of Aquaculture Feed. 1991 Unpublished J. R. Snell
61 "A Novel Process for Municipal Solid Waste Utilization by Accelerated Land Fill Gas Generation" Dec 5, 1996 Power-Gen '96 International Conference, Orlando, Fl. J. R. Snell
62. "A Unique Way to Rapidly Produce Methane Gas From Refuse Landfills Which Can Be a Solution to the Electric Industry Dilemma, as it Effects Global Warming." Sep 1997 at the Power-Gen '97 International Conference in Singapore, By John R. Snell [Read by Dr. A. Sanyal P.E.]
63. "Toward A Better World" --Adventures of a ' Missionary ' Engineer' 250 page book on the life and adventures of and by John R. Snell WinePress Sep 1997
64. "A Unique Way to Rapidly Produce Methane from Municipal Refuse and Landfills Which Can Aid in the Solution of Global Warming" Apr 26-29 1998 Ft. Lauderdale, Fl at the International Combustion Engine Div. & the Environmental Engineering Div. of the American Society of Mechanical Engineers by John R. Snell

+ 3 more in '98-'99

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TOWARD A BETTER WORLD

ADVENTURES OF A "MISSIONARY" ENGINEER

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2001-003815 2/8 P 4:17

Secretary Spencer Abraham

February 4, 2001

U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Dear Mister Secretary,

I respectfully send this letter to you with an e-mail attached. I have repeatedly attempted to receive any acknowledgement of my issues and interest in participating in the development of an effective commercially responsible, as well as politically acceptable Energy Policy. This is my hope that a written letter commands more attention than e-mail.

Congratulations and Good Luck,

Barry Siler

Barry Siler
CEO
Kodiak Fuels

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Barry Siler

From:	Barry Siler [bsiler@jetfuel.com]
Sent:	Sunday, February 04, 2001 8:09 AM
To:	President George W. Bush
Cc:	Senator Kay Bailey Hutchison; Senator Phil Gramm; Secratary Spencer Abraham; Vice President Dick Cheney
Subject:	Energy Policy

I have sent the attached e-mail to everyone copied on this e-mail with no response except auto-responders from some.

I am also sending this to all via mail in hopes that a least one of you respond and hopefully support me in my effort to become involved in developing and maintaining a pro-active energy policy for National Defense and in support of both industry and the public.

In addition to the attached prior e-mails, I would like to recommend that we establish a team to deal with MTBE in gasoline. We already have shortages as a result of California's PhenPhen government. They try a quick fix , only to find out they created a bigger problem than they had before. Now that the world anticipates the inability to add MTBE into gasoline many producers have modified their plant creating a serious supply shortage. 2001 will be bad, 2002 will be another nightmare.

We are also in a period to deal with distillates in May-August of 2001. We have east coast inventories that I hope are commingled due to stability problems. Rest assured, the storage companies are "using" the heating oil and making lots of money. We are in a backwardated market providing them great value in time trades for even 2-7 days. We should get this benefit. Jetfuel would be no different. We need to convert additional SPR crude into heating oil in the east coast by August , minimizing the industry impact but taking advantage over very depressed heating oil crack speads. We should also do this with jet furl or more specifically Colonial 55 grade kerosene.

I have only asked for an opportunity to become involved in the energy program. When I apply for a job, I at least get a letter of refusal. I have received nothing, but especially nothing from my Senators. I sent them numerous e-mails for over a year. I have them if you would like to review them.

Good luck in this natural gas dilemma, but don't forget to do something more about heating oil and jet fuel now. There are many other issues I would like to discuss if you have the time. I would be honored to visit any of you at my expense to express my opinion and better yet my solutions. You are using Drew laughlin, a good friend of mine, in you natural gas problem. You could not have picked a better, more commercial and intelligent professional to assist you.

Last e-mail:

I have repeatedly sent e-mails to Secretary Abraham, Senator Hutchison and Senator Gramm about key energy issues. I have not received a response from any of them.

Congratulations on your selection of the lead on Energy Issues, especially the California problem. I wish that someone with some commercial sense would have reviewed the California bill that put them in this position years ago. California seems to be pro-active in their legislation but all to consumer oriented which eventually, like now, bites them hard. There should be a balance of business needs and consumer needs which is evolutionary not stagnant.

I feel that everyone in the Energy Department before this administration has been issued fire extinguishers so that they concentrate on putting out fires rather than providing the nation with a definitive long term Energy Policy.

I would like to work with you and Secretary Abraham in the development and implementation

of a sound and broadly fair energy policy. I have a sound commercial background and realize that this is a political issue and compromise seems to be the method of success. I only ask that you have some constant representation from the commercial market so that proposals, even though politically sound, like California natural gas, do not fall into the "black hole". This is also an evolutionary process that requires a pro-active approach with the very best people involved. There is no "quick fix" but proposals need to be implemented on a timely basis to insure National protection and defense when needed. I pride myself on forward thinking and making informed decisions leading to desired conclusions. I use Southwest Airlines as an example. I was their "outside industry risk management specialist" referred to in their recent earnings statements and use Gary Kelly, CFO, and John Denison, Executive Vice President, as references.

I have a home page at www.jetfuel.com and currently am a consultant in price-risk management, B2B activities and procurement auctions. My resume is on my home page.

My background is quite broad, but I would like to assist you and Secretary Abraham in the development of a national energy policy as well as become the key contact with the United States refiners, producers, end users etc. as well as being involved in the pro-active utilization of the SPR while considering the storage of jet fuel in countries around the world. I think we should convert as much of the crude to refined products stored in strategic locations on a timely basis as possible. Working with Dow Chemical, I stored millions of barrels of crude, jetfuel, heating oil and other products in salt domes. Again, my real strength is in forward thinking. I pride myself in anticipating problems and opportunities and making recommendations as to solutions. You know consultants, at the very least, they have an opinion.

My concern today is the impact of energy prices on the economy. If corporate earnings are poor, with in many cases much of the blame placed on energy costs, the consumer will get hit many times harder (I am). Just using pure economics, we could have exchanged, while increasing our overall SPR inventory, January crude for February crude and collected over $2.00 per barrel. This would also have significantly decreased the price of crude and products, not necessarily reducing refinery margins. It would have also sent a signal to OPEC that $20-$22 crude is acceptable but their "basket " of now $25 minimum ($28-$30 WTI) is unacceptable. Price elasticity has already reduced demand, and OPEC will see that through June. I expect they will announce another reduction of at least 1-1.5 MMbd of production by the middle of February. We need to address this issue as well. We need to dilute Iraq's crude influence and now is the time. Many powerful OPEC nations, like the Saudi's, want to increase their trade with their Arab brothers.

I also recommend having another key assistant to Secretary Abraham who deals with international details and coordinates very closely with the United Nations and OPEC as well as non-OPEC nations.

I can only offer you hard work, long hours and a broad experience. I would be honored to work with you. I understand your probable interest in working with people you know. I would most likely surround myself with people I know and respected. I ask only for an opportunity to visit and hopefully gain your confidence and convince you to include me in your team.

I happen to have gone to Albion College and my Father and Mother still live in Albion. I have asked Robert Teeter (knew him at Albion) to be a reference. I also played professional football for New Orleans Saints in 1967. This is the first year I have been able to say that openly.

I know this is a long e-mail and there are many more issues to resolve. Thank you for your consideration.
Good luck!

Sincerely,
Barry Siler
CEO
Kodiak Fuels

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2001-003523 Feb 6 p 4:08

Chevron

February 5, 2001

Chevron Corporation
575 Market Street
San Francisco, CA 94105-2856

David J. O'Reilly
Chairman and Chief Executive Officer

The Honorable Spencer Abraham
Secretary
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

Dear Secretary Abraham:

It was good to meet you during President Bush's Inauguration. Attached is a letter I recently sent to the President that outlines Chevron's recommendations for a comprehensive U.S. energy policy.

I support the Administration's call to increase our energy supply, and improve delivery infrastructure. Developing a consensus on a national energy policy will be very challenging. One way to start building the consensus is to hold a "National Energy Summit," bringing together thought-leaders to address the pressing energy issues facing our nation.

In our meeting, we briefly discussed the electricity crisis that is gripping California. You may find the attached Chevron paper on this issue of interest.

Chevron wants to be part of the solution to the energy challenges facing the U.S. Please do not hesitate to call when we can be of assistance.

Sincerely,

Dave O'Reilly

Attachments

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Chevron

February 5, 2001

Chevron Corporation
575 Market Street
San Francisco, CA 94105-2856

David J. O'Reilly
Chairman and Chief Executive Officer

President George W. Bush
The White House
Washington, DC 20500

Dear President Bush:

Thank you for your call to the nation for a new approach on the way we address the energy issue in the United States. I applaud your naming Vice President Cheney to head up a new interagency team on energy issues. Too often energy development has been stymied by lack of cooperation among the federal agencies that have jurisdiction over a specific project. Your action is an important step in the right direction.

I am reminded daily of the seriousness of our nation's energy problems as I read headlines about the electricity crisis in my home state of California. During the past two years, it has been abundantly clear that the U.S. needs a clear, coherent energy policy. Your early leadership has helped put this issue squarely before the nation. I strongly support your admonition that we need to increase our energy supply, and improve the infrastructure that delivers energy to the consumer. Attached are Chevron's recommendations for a comprehensive energy policy -- both domestically and internationally.

Building the necessary national consensus around a sound energy policy will require that a strong coalition be built. Already, special interests are promoting the old paradigm that increasing energy production will compromise the environment. While the public is now keenly aware that the U.S. is suffering from the lack of an energy policy, public opinion has not yet jelled on why there is a problem -- and what to do about it.

A positive first step toward building the necessary consensus should be to hold a "National Energy Summit." You have my commitment that we will provide Chevron's ideas on how to define the energy problem facing the U.S. and how to craft a U.S. energy policy. Years of federal neglect on fostering energy production cannot be reversed overnight. However, there are a few early actions that will help begin to improve the energy environment. These actions would support two goals -- building a consensus, and eliminating federal barriers to increased energy supplies.

In brief, I recommend the following:

1. Charge the Environmental Protection Agency (EPA) Administrator to identify and address federal barriers to permitting energy projects (e.g. projects to develop new supplies of energy, and projects that produce cleaner transportation fuels). Although most permitting is led by the states, EPA usually has an oversight role. Too often, this federal role is limited to identifying problems with the state's permitting procedures, rather than acting to solve problems. The federal/state interface on permitting issues should be evaluated to have EPA act as an enabler to help states ensure permits for energy projects are both environmentally sound and timely.

2. Promote legislation to address the balkanization of transportation fuels. Recent federal, state and local regulations have led to a patchwork of boutique fuel requirements, which have contributed to supply constraints and increased fuel costs. Comprehensive energy legislation should address the regulatory requirements affecting the nation's motor fuel supply. A federal plan should be developed to move the U.S. to nationwide performance-based standards for gasoline and diesel fuels.

3. Proceed with domestic energy development, including Lease Sale 181 in the Eastern Gulf of Mexico scheduled for later this year. This announcement would complement and reinforce your support to open ANWR, and demonstrate a commitment to reject unjustified opposition to new energy leasing and development.

4. Oppose any attempt to reinstate the Iran-Libya Sanctions Act (ILSA) which sunsets on August 5, 2001, and consider lifting or modifying the current Executive Order that prohibits U.S. companies from doing business with Iran. U.S. energy policy should recognize the global nature of energy supply, and the role that foreign countries play in our nation's energy security. We urge your administration to support U.S. based companies efforts to expand and diversify the supply of energy throughout the world. This includes your support for eliminating ineffective, unilateral trade sanctions and promoting open trading relationships.

Longer term, there are several elements necessary for a comprehensive energy policy. These are discussed in more detail in the attached paper.

Again, I appreciate your commitment to pursuing a sound energy policy for our nation. If I can assist in any way with the consensus building process, please do not hesitate to call me.

Sincerely,

Attachments

Chevron's Recommendations
For a Comprehensive U.S. Energy Policy

I. ENERGY POLICY OBJECTIVES

An effective national energy policy that will stand the test of time is critical to sustaining the strength of the U.S. economy and improving the quality of life throughout the world.

Historically, the government and the public have become most concerned about energy issues when prices rise rapidly or there are shortages. This occurs whenever energy demand exceeds available supply -- even by a small amount – due to politically imposed constraints, unusual weather, regulatory uncertainty, or manufacturing and distribution problems. In addition, there is increasing public concern about the impact of energy use on air and water quality, and on the climate. To address these issues, Chevron renews its call for the creation of a cohesive, long-term energy strategy.

Chevron believes that a comprehensive national energy policy should:

- **ensure that energy supplies are sufficient to support economic growth which improves people's quality of life,**
- **encourage responsible use of energy in order to fulfill society's expectations for energy security, environmental performance and energy efficiency, and**
- **support basic and applied scientific research to improve energy availability, utilization and environmental performance,**
- **recognize that significant advancements in technology and improved practices permit discovery and development of energy resources with minimum environmental impact.**

II. POLICY PRINCIPLES

A. Efficient Markets -- Markets are the most effective means of meeting consumers' needs and maintaining a robust economy. Thus the government should identify and remove impediments to an efficiently functioning marketplace for energy, and work with other governments to do the same. Specifically:

- **Fuel Neutrality** -- The market should determine the source and use of various fuels, and govern the introduction of new technologies. Government policies should be fuel neutral and should not mandate or subsidize specific types of fuels or energy. Regulations should allow all contenders to compete on a level playing field, provided they meet environmental performance requirements.

- **Incentives** --The government should provide no incentives or subsidies, except to fulfill clear and overriding energy security or environmental objectives.

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- **Electricity Markets** -- U.S. policies should promote restructuring of the electric industry to facilitate the development of electricity markets characterized by price transparency; non-discriminatory, open access to transmission and distribution; multiple, competing generators/suppliers; and broad geographic scope. The government should support the creation of a seamless, interconnected transmission grid, governed by non-discriminatory standards and operating procedures.

- **Tax Neutrality** -- U. S. tax policy should not limit U.S. companies' ability to compete internationally with non-U.S. companies. Misguided rules can disadvantage U.S. multinationals through double taxation, administrative complexities or other burdens that are not borne by their non-U.S. competitors. Most importantly, a full foreign tax credit is critical to avoiding double taxation and maintaining U.S. competitiveness.

- **Gas Pipeline Regulations** -- Government policies should continue to promote competition in the gas transmission market by ensuring open access to pipelines. There is significant competition at the supply end and burner-tip end of the natural gas pipeline grid, yet there is little or no competition among the interstate pipelines.

- **Trade Relations** -- Government policies should encourage economic engagement with other countries and reject the use of energy policy to achieve unrelated foreign policy objectives. We believe this is the best way to increase the security and diversity of energy supplies, to promote economic prosperity and to foster the growth of democracy, freedom and human rights. We oppose any unilateral interference in the market, whether it's through the imposition of import duties/fees, trade sanctions or restricted trade relations.

- **Inter-Governmental Collaboration** -- The U.S. government should work with Canada and Mexico to encourage a well-integrated North American distribution system so that gas and electric resources can be developed and efficiently moved to market. Significant supply, market and infrastructure opportunities exist within all three countries.

B. **Environmental Responsibility** -- Government policies should foster continuous improvement in environmental performance while increasing both the supply of energy and its efficient use. The nation's environmental objectives should be supported by scientific studies and implemented through performance-based regulations. Specifically:

- **Conservation** -- Government should identify and support research programs that promote technological advancements aimed at significantly improving efficient consumption of all sources of energy. The government should also support expanding the information available to consumers concerning the energy consumption of products in order for them to make more informed decisions.

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- **Supply** -- Government should acknowledge and support environmentally responsible methods of discovery and development of new resources.

- **Global Climate Change** -- As indicated, there is increasing public and government concern about global climate change. The government should adopt policies to give companies credit for voluntarily reducing greenhouse emissions. Furthermore, the government should fund research to better understand global climate change and the influence of human activity on the climate.

- **Fuel Supply** -- Increased state and local regulatory activity has led to a patchwork of boutique fuels requirements, which is contributing to supply constraints and increased fuel costs. To better meet consumer needs, the federal government should adopt nationwide performance-based fuel standards for gasoline and diesel. Additionally, we support national standards for fuel parameters that are necessary to enable emission control technology to operate efficiently.

C. **Energy Security** -- Federal policy should encourage the expansion and diversification of supplies of all sources of energy. Government should acknowledge and support development of energy resources based on significant technological advancements that permit discovery and development with minimum environmental impact.

- **Access to Energy Resources** -- Substantial federal policy and regulatory barriers constrain the supply of U.S. natural gas and crude oil. They restrict or prevent responsible energy development on most of the Outer Continental Shelf and in many highly prospective areas of Alaska and the Rockies. Government must improve resource access, streamline application and permit processes, eliminate unnecessary delays and reject unjustified opposition to new energy leasing and development.

- **Commercial Advocacy** -- Chevron supports an expanded U.S. government role in advocating for overseas energy development projects of U.S. companies. This helps them compete with non-U.S. companies that have historically benefited from fiscal support and high-level advocacy by their national governments (details on this principle as an appendix).

- **Strategic Petroleum Reserves** -- We support a Strategic Petroleum Reserve of crude oil that is owned and controlled by the federal government to deal only with national emergencies. The funding of the reserve should be through general revenues, and not through a requirement that oil importers set aside a percentage of their imports or the monetary equivalent. We oppose the creation of regional product reserves because they would interfere with the efficiencies of the market and ultimately increase costs to consumers.

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D. **Scientific Advancement** -- The federal government has a fundamental role in advancing basic scientific research, while the private sector is best suited to the commercial implementation of new energy-related technologies. Specifically:

- The government should fund basic scientific research and support university education in science and technology.

- The government should fund research in the fundamental science of climate. Additional research by government, university and other scientific organizations is needed to improve our understanding of the global climate.

- The government should fund applied research, technology development and demonstration projects in energy only in partnership with the private sector. Such programs can be an important complement to private sector R&D investments. Examples would include programs to improve energy efficiency and to identify cost-effective climate change mitigation strategies and technologies

Attachment: **Chevron Recommendations for U.S. Energy Policy: International Energy Policy Component**

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Chevron's Recommendations for U.S. Energy Policy
International Energy Policy Component

The United States currently imports 56% of its petroleum resources and imports are forecasted to reach 64% by 2020. The U.S.'s dependence on imports reinforces the need for a long-term energy strategy that will ensure that energy supplies are sufficient to support economic growth. From an international perspective, a comprehensive energy policy should encompass the following objectives:

- Ensure secure access to a broad array of energy resources. This includes multiple sources of supplies from a number of geographies, and from a variety of energy sources (e.g. crude oil, LNG) and markets (e.g. OPEC vs. non-OPEC);
- Foster open access to international markets;
- Recognize that international market conditions are best fostered under rule of law and transparent applications;
- Create a level playing field for U.S. companies operating in the international marketplace;
- Acknowledge that policies of engagement are more effective than forcing a result or imposing punishment through unilateral sanctions;
- Encourage the U.S. Government to facilitate resource expansion by providing innovative technical mentoring and financial support, particularly for those objectives best achieved through governmental channels.

A. Normalize Trade Relationships

The U.S. Government should develop open trading relations with all countries in order to increase the security and diversity of energy supplies. Positive U.S. economic engagement is also the most effective means of promoting the values of responsible economic and social development. Although there are many policy issues that must be addressed with those countries with which we do not enjoy a normal trade relationship, the government should continue to pursue trade policies that allow U.S. businesses to invest and compete in countries where our overseas competitors are investing.

U.S. trade policy should take specific steps as suggested by the following examples to normalize trade relationships in recognition that sustained U.S. economic growth is dependent on strong international relations:

- Continue bilateral consultative commissions which are effective in establishing dialogues and improving economic and social engagement (recent examples of this include the U.S.-Angola Bilateral Consultative Commission, U.S.- Nigeria Joint Partnership for Economic Cooperation, the U.S.- China Oil and Gas Forum, and the U.S.-Kazakhstan Joint Commission);
- Ratify the U.S.-Vietnam Bilateral Trade Agreement;
- Accelerate the process of reviewing export control applications.

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B. Engagement vs. Unilateral Sanctions

The U.S. Government should recognize that policies of engagement are a more effective means of promoting economic prosperity, introducing international business practices and fostering democratic principles. Unilateral sanctions are ineffective and have restricted U.S. companies from doing business in markets that are open to our foreign competitors. Unilateral sanctions result in reduced opportunities for U.S. construction, supply, and service companies, which reduces jobs for U.S. citizens, as well as reduced tax revenues for the United States. As an important step in moving away from a policy of unilateral sanctions, the government should enact the Sanctions Policy Reform Act (the Crane-Lugar bills) to require a more deliberative process to assess the full impact of sanctions before it can invoke unilateral sanctions. In addition, the following actions need to be taken to encourage economic engagement by U.S. companies:

- Rescind the Executive Orders banning oil-related investments in Iran, Libya and Cuba.
- Repeal Section 907 of the Freedom Support Act, which currently limits U.S. Government assistance programming to the government of Azerbaijan.

C. Encourage Good Governance Initiatives

The U.S. Government should assist transitioning economies to develop the institutions and systems of good governance and support the rule of law. Assistance in support of the rule of law provides an appropriate environment for ensuring the protection of investments, provisions for worker safety and security, and the environmentally sound development of energy resources. The government should be particularly supportive of those sustained initiatives which have public/private sector participation and cooperation as they are perhaps the most effective method of delivering such assistance. Participation by host country or regions, along with practical programming with measurable targets, is critical to the success of these initiatives

U.S. trade policy should undertake the following specific actions to continue to encourage Good Governance and further increase energy supplies:

- Continue funding for the Office of Transition Initiatives as a rapid response organization for Nigeria and other targeted countries;
- Partner with non-OECD countries to foster understanding and adoption of the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions;
- Fully fund U.S. obligation to pay U.N. dues arrearages to allow continued U.N. programs in support of Good Governance initiatives.

D. Expand U.S. Government Advocacy Role

U.S. government should expand its role as an advocate in securing new international energy development projects involving U.S. companies, as well as in the resolution of issues that arise during ongoing projects. U.S. companies are operating at a disadvantage to their foreign competitors who enjoy the support of their own governments in providing

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fiscal and high-level direct government advocacy on their behalf. A coordinated, interagency process that leverages the strengths of individual government agencies to partner with U.S. companies can provide maximum support for U.S. commercial projects. Advocacy efforts would also provide an opportunity to recognize the impact of U.S. companies on sustainable development for transitioning economies.

U.S. Government advocacy could provide assistance and expand U.S. energy resources through:

- Continued Congressional appropriations supporting U.S. Government agencies and offices engaged in international advocacy, especially the:
  - U.S. Department of Commerce: Advocacy Center, Foreign Commercial Service offices;
  - U.S. Department of Energy: Office of International Affairs;
  - U.S. Department of State: Regional bureaus, USAID-OTI, U.S. Embassies;
  - U.S. Trade and Development Agency;
  - Overseas Private Investment Corporation (OPIC);
  - U.S. Small Business Administration (supporting businesses in developing countries);
  - U.S. Export-Import Bank
- Mediation and demonstration of successful resolution of border disputes would open new sources for exploration and development (examples include the Thailand/ Cambodia overlapping zone);
- Sustained support for diversified export routes that promote regional cooperation through commercially viable projects (the Caspian Pipeline is an example);
- Technical mentoring in regulatory reform assistance (the West Africa Gas Pipeline is an example);
- Support for initiatives encouraging the use of environmentally friendly fuels to meet growing power demand in developing countries;
- Expansion of the Black Sea Oil Spill Response Program to the Caspian Basin;
- Reinvigoration of a working group to set significant goals for the APEC Natural Gas Initiative.

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CALIFORNIA'S ELECTRICITY MARKET: A PATH FORWARD
(1/12/00)

EXECUTIVE SUMMARY

California faces complex policy issues as it grapples with tight electricity supplies and volatile prices. Chevron believes the state should not retreat from its goal of letting an open competitive market provide a lasting solution. Markets are the most effective means of assuring adequate supplies to meet consumers' needs as well as maintaining a robust economy. Accordingly, the state's long-term plan to remedy the situation should include measures to:

- Increase new power generation and associated infrastructure.
- Improve the siting process for power facilities.
- Rely on transparent price signals, not price controls or caps.
- Encourage wise use of energy.
- Maintain assistance for low-income consumers.

The state's near-term efforts to address the current crisis should include measures that:

- Dampen demand through voluntary measures wherever possible.
- Address and, if possible, avoid "price shock" to consumers. Existing price controls should be removed at the first opportunity.
- Do not jeopardize or discourage investment in, or operation of, existing or future cogeneration. Unless they have contractual obligations to deliver power, cogeneration facilities that are integral to an industrial process should be encouraged, not mandated, to deliver power to the grid. The state's need for electricity must not be allowed to jeopardize generating facility equipment or the associated manufacturing process, or violate permit requirements.
- Support the financial health of the utilities while ensuring utility shareholders and consumers are treated equitably. Any rate increases should allow for the review, audit and proper allocation of cost within an appropriate time period.
- Allow conformance with RECLAIM and other environmental requirements in ways that do not jeopardize electricity supplies.
- Improve procedural practices and governance of the California Independent System Operator (ISO)

The Federal Energy Regulatory Commission (FERC) should not impose cost-based wholesale rate regulation for generation sold in the western states. In addition, the state should not force consumers to pay all of the undercollected wholesale costs that have accrued in utility accounts.

There are several key issues for Chevron which arise from its various roles:

- As a self-generator with significant investment in cogeneration facilities that serve the majority of our electric load, we must prevent attempts by regulatory bodies and utilities to use our facilities as if they were power plants designed to operate for the benefit of the electric grid. We must also oppose regulatory measures requiring our facilities to deliver power to the grid if they would

cause damage to our cogeneration, producing or refining equipment, or cause violations of warranties or permits.

- As a self-generator that sells excess power into the grid under regulated conditions, we must ensure the prices paid for our surplus electricity adequately compensate for the costs to generate.
- As a consumer, Chevron can maximize its contribution to reducing demand for electricity by expanding participation in load shedding programs, conservation and exploring alternative power generation at our facilities.
- As a provider of energy management services to other energy users, Chevron offers services to help others in reducing their impact on the electric grid and lowering operating costs.
- As an employer, Chevron can urge its employees to do their part to use electricity wisely both at the office and in the home.

BACKGROUND/HISTORY

Throughout the early and mid 1990's, California struggled with low economic growth. Much attention was focused on reducing the cost of doing business in California. The sky-high electricity rates (50% higher than the national average) coupled with the lack of competition in suppliers (regulated utilities with prescribed service areas) led to political discussion of electric utility deregulation. Business customers demanded "direct access" to competing suppliers, residential customers wanted rate decreases, and utilities demanded to be compensated for generating assets that they perceived would be "economically stranded" if customers could access lower-cost supplies.

With a 25% surplus of generating capacity in the West and low natural gas prices fostering the belief that new efficient gas-fired generation could produce less expensive electricity than the existing utility nuclear and coal-fired plants, political leaders fashioned legislation to achieve all these objectives (AB 1890), and the various constituent groups (including Chevron) lined up in support. As enacted, AB 1890:

- Mandated collection as a surcharge on utility rates of "competition transition charges" – CTC – to allow the utilities to recover investment in their "stranded" assets;
- Protected existing consumer cogeneration investments by not imposing charges for CTC on the load serviced by those facilities;
- Provided residential and small commercial consumers with a 10% rate reduction, and established a "freeze" on retail rates until each utility collected its generation-related CTC or until 3/1/2002, whichever came first;
- Established two entities (California Power Exchange – CaPX – and the California Independent System Operator – ISO), the former to manage a the wholesale market for electricity bought and sold in California and the latter to manage statewide transmission of that electricity in real time.

Unfortunately, the electricity supply/demand model envisioned at the time AB 1890 passed did not materialize. The power surplus in the West was consumed by rapid

economic and population growth in the region – demand soared, and once the surplus was exhausted, wholesale power prices escalated quickly. New generating plants were not built as siting problems arose (particularly local opposition to California plants) and natural gas prices rose to levels which called into question the competitiveness of gas-fired generation. In addition, deficiencies in implementation of AB 1890 such as the rules for forward contracting exacerbated rather than helped the situation.

In the summer of 1999, San Diego Gas & Electric announced it had collected its CTC and emerged from under the rate freeze. For the first time in California, customers began to get bills based on this new market reality as SDG&E passed through higher wholesale prices to the retail consumer. The state's other utilities (PG&E and SCE), still operating under their rate freezes, have been caught in the conflict between higher wholesale prices and an inability to pass through those costs.

It seems clear that the market mechanisms constructed by AB 1890 and implemented by the CPUC, CaPX, and the ISO to "manage" an electricity market where costs and prices were predicted to fall can not respond to the current market – a market with tight supplies where costs and prices are rising. A good part of the problem is that the market was not deregulated but "managed" and that both legislative and regulatory policies need to be re-examined in today's market conditions and altered to move California toward an open market for electricity. Today's problems suggest that a transition period of several years may be necessary to overcome the market distortions of the past few years and bring supply and demand into balance at lower price levels.

While Governor Davis criticized wholesalers during the last few months of 2000, his most comprehensive response was part of his 2001 State of the State Message. Calling deregulation a dangerous failure, he proposed a series of short-term measures ranging from allowing the utilities to contract forward to new criminal penalties for withholding power from the grid. He also proposed additional steps such as exploring a State Power Authority to build and/or acquire generating plants. His strongest remarks criticized out-of-state generators. Saying the state had surrendered control, he went on to assert California must regain control over the power generated within the state and use it for the public good. And that would include using his powers of eminent domain if necessary. Finally, it is noteworthy that one of his most concrete proposals was to expand conservation programs to help avoid short-term supply shortfalls.

CHEVRON POSITION

The state should not retreat from its goal of letting an open competitive market provide a lasting solution. Markets are the most effective means of meeting consumers' needs and maintaining a robust economy. The role of California's government and other stakeholders should be to identify and remove impediments to an efficiently functioning marketplace for electricity. More retail and wholesale competition is needed, not less. The state should strive for an open marketplace where multiple purchasers are vying to

buy power from multiple generators/suppliers in competition with each other. It must also strive for an economic climate that encourages new energy investment of all types.

There are long and short term measures that need to be pursued to achieve the benefits of fully competitive markets. We believe the following elements should be part of the state's long-term plan to remedy the situation:

- **Increase power generation and associated infrastructure.** There is no question that new generation and infrastructure are essential. At the same time California is part of a regional energy system. Therefore, it must participate with the other western states in addressing what is really a regional power shortage. California need not be self-sufficient in electric generation. But it must expand or construct new generation and transmission facilities and do so in locations that will support the stability of the entire state and regional grid. This does not mean just constructing new power plants. Alternatives such as cogeneration and distributed generation should also be supported for their fuel efficiency and reliability benefits. In addition, both the state and region must have new and upgraded infrastructure to ensure the West has integrated delivery systems capable of getting fuel to the generator and electricity to consumers. This means new or expanded natural gas pipelines and electric transmission/distribution facilities.

  As new generation and infrastructure are added, the market should determine the source and use of various fuels, and govern the introduction of new technologies. The state's policies should be fuel neutral and should not mandate or subsidize specific types of fuels or generating resources. Regulations should allow all contenders to compete on a level playing field, provided they meet environmental performance requirements

- **Improve the siting process.** Environmental and land use constraints with "NIMBY" pose significant hurdles and delays for proposed projects. Procedures for permitting new and/or expanded generation and transmission need to be streamlined to expedite decision-making. Recent cases where local authorities have blocked the siting of generation facilities point to the need for a better funded and more engaged centralized authority for siting energy and infrastructure projects needed by the state and region. The state authority should balance the state's needs for power with its commitment to environmental values and local decision-making. The state also needs to work actively with federally-chartered regional organizations in facilitating siting of interstate infrastructure projects.

- **Rely on transparent price signals.** Price signals must be transparent to all market participants. If the market is functioning freely, those signals will elicit the appropriate responses to bring supply and demand into balance. Increasing prices will induce consumers to reduce or alter their consumption as well as attract new generation investment. The resulting drop in demand and increase in supply should then serve to lower prices. Government should not impose price caps because they hide the market signals and lead to distorted responses. For example, price caps will

discourage investment in new supplies because it may not be possible to realize the needed return of, and on, those investments.

- **Encourage wise use of energy.** Businesses and citizens should be encouraged to use energy in the most efficient manner possible, while relying on the price mechanism to send the appropriate market signals. Government should support expanding the information available to consumers concerning the energy consumption of products so they can make more informed decisions.

- **Maintain assistance for low-income consumers.** The various safety net provisions (e.g. lifeline rates) should be reviewed and updated as necessary to avoid significant undue hardship for low-income or other customer classes. This applies to the near term situation as well. Some form of rate "stabilization" program by the local distribution companies may be required for this group.

We recognize the state is facing a crisis demanding immediate actions as well. Finding ways to reduce consumption of electricity will be the most effective near term response to shortages and reliability problems. Overall, we believe the following elements should be part of the state's near-term efforts to address the current crisis:

- **Dampen demand through voluntary measures wherever possible.** Until more generation supplies are brought on-line, voluntarily reducing energy demand will provide relief to the system and help in avoiding blackouts. This starts by educating the public about the situation and the need for conservation. Every effort should be made to get the public, government agencies, and the business community "on board" a voluntary conservation effort over and above those measures dictated by price. There are also opportunities to improve the ability of business to participate in "demand relief" or load-shedding programs with the IOUs and the ISO. For example, Chevron has been precluded from using standby generation to participate in those programs by a regional air quality management district rule. Better coordination among government agencies is needed to improve the effectiveness of demand relief programs in the transition period.

- **Address and, if possible, avoid "price shock" to consumers.** Consumers have not yet been conditioned to respond to price signals by adjusting their consumption. In fact, their conditioning has been delayed by shielding them from price signals under the AB 1890 rate freeze. Consumers should receive market price signals as soon as possible, but not in a way that creates a "price shock" that could trigger a revolt or severe economic contraction.
    - Wholesale price controls. Various officials have called for state and regional caps on wholesale prices for electricity and natural gas. Price caps encourage generators and traders to sell their power elsewhere to avoid the cap. Caps also discourage investment in the new generation and associated infrastructure that the state and region need. History shows that such regulatory price controls do not solve supply shortage problems. The current "soft" cap implemented by FERC for California appears to avoid restricting term

contracts or prohibiting wholesale generators from receiving spot prices above a specified level. Nonetheless, FERC must be vigilant in monitoring the effects of the soft cap and should remove it at the first opportunity. In the long term, we do not support a cap.

- Retail prices. The CPUC has implemented higher interim retail rates for PG&E and SCE consumers in an attempt to support the financial integrity of the utilities. Such retail rates should be replaced with true retail market prices at the first opportunity. It may be necessary to structure the transition to true retail market prices over a transition period corresponding to the period that new power supplies come on-line. This should be done in such a way that consumers are shielded from extreme price volatility as they move to true market retail prices.
- Cost shifting. The ISO and CPUC will be tempted to minimize the burden to residential consumers by arbitrarily shifting costs onto industrial and self-generation customers. They must resist that temptation. The long term impact on California's economy of such cost shifting could be devastating.

- **Do not jeopardize or discourage investment in, or operation of, existing or future cogeneration.** All market participants must direct their efforts toward maximizing generation supply. Unfortunately, proposed ISO policies would impose new costs on customer-owned QF[1] generation. Additional proposals by the ISO and other agencies would call upon QFs to generate power based on the needs of the electric grid rather than the needs of the industrial process linked to the QF. These policies could lead to disconnection from the grid and should be rejected. Calls upon QF resources in system emergencies must not jeopardize their operations that are integral to manufacturing processes. This means QFs should not be required to deliver power if there is a risk of damaging their generating equipment, compromising the associated industrial processes, or violating operating permit requirements. The price paid to QFs should not be lower than their reasonable production costs plus a return on investment. A price that does not reflect prevailing market prices or conditions will create discriminatory prices that will distort investment and market signals.

- **Maintain the financial integrity of the utilities.** Having reliable power infrastructure is important to the state. Introducing the complexities of a bankruptcy filing and proceedings for the two largest state utilities will divert resources from seeking meaningful solutions and prolong the period of financial uncertainty. Steps should be taken to support the financial health of the utilities while ensuring both utility shareholders and consumers are treated equitably. Any rate increases should allow for the review, audit and proper allocation of cost within an appropriate period of time.

[1] QF = Qualifying Facility. A Qualifying Facility is an electric generating facility meeting certain performance and operating criteria under the Public Utility Regulatory Policies Act of 1978 (PURPA). Cogeneration is the most common form of QF generation. QFs generally receive payment for the electricity they sell from the local utility. The payments are based on the utility's alternative cost of providing that power, the so-called "avoided cost."

- **Allow conformance with RECLAIM and other environmental requirements in ways that do not jeopardize electricity supplies.** This year's extraordinary power demands have resulted in several generating stations in the South Coast district and elsewhere exceeding their NOx emission allowances or caps under RECLAIM or similar programs. As a result, several units were shutdown late in the year during stage 3 energy emergencies. New procedures need to be put in place to allow these units to access emission credits quickly and maintain operations during system energy emergencies. Credits could be obtained by such means as short term loans, interpollutant exchanges, forward purchases, or allowing these units to otherwise mitigate excess air emissions.

  AB 970 was enacted last year to expedite permitting for generation dedicated to the grid. The provisions of this law should be expanded to expedite the approval/interconnection of customer-owned projects such as cogeneration and distributed generation. Key agencies such as the CEC, CPUC, CARB, and ISO (and the Legislature if necessary) also need to build upon AB 970 to develop reasonable rules for expediting temporary generation projects. These projects include reactivating idle plants, adding peaking plants, and bringing in temporary generation.

- **Improve procedural practices and governance of the California Independent System operator (ISO).** There is widespread recognition that the board of the ISO needs to be reconstituted. In addition, the ISO continues to advocate and implement counterproductive policies (see above comments on QF generation) without an appropriate system of checks and balances. The ISO needs to be restructured to ensure it is efficient, fiscally responsible and provides meaningful opportunities for public review and due process.

Several extreme measures are being proposed which would be exceedingly harmful to the state's business environment and greatly hinder efforts to reach a solution. For example, some officials have proposed establishing a state public power authority to own and operate generation, transmission and distribution. Some consumer groups have proposed "windfall profits" taxes. We oppose those proposals as well as measures which would:

- **Establish cost-based wholesale rate regulation.** Re-regulation would stall the development of needed generation resources and infrastructure. It would divert industry resources from efforts to improve the existing market structure consistent with the state's long-term vision of a competitive electricity market. It would also frustrate the expectations of investors in divested or new generation, and create an administratively unmanageable regulatory structure. Cost-based regulation should be rejected.

- **Force consumers to pay all of the undercollected wholesale costs that have accrued in the Transition Revenue Accounts (TRA).** The total cost incurred by the utilities for energy purchases from the PX has exceeded the revenues received from their customers through frozen rates for energy. Under AB 1890, investor-owned utilities are not entitled to recover "excess energy purchase" costs incurred

during the rate freeze period. While a situation of the present magnitude was not envisioned at the time of passage and some recovery of these costs is essential, the utilities clearly accepted some degree of market risk in return for the long-term benefits offered under AB 1890. Forcing consumers to pay the full amount of accrued power procurement costs effectively transfers all the market risk to consumers and holds the utility shareholders harmless. While the financial integrity of the utilities needs to be maintained, consumers should not be forced to bear the full burden of the accrued costs, either retroactively or at some time in the future.

CHEVRON ACTIONS/ISSUES

As the electricity debate continues in California, there are several key issues for Chevron which arise from our positions as a significant self-generator, as a consumer of electricity at facilities ranging in size from service stations to refineries, as a provider of energy management services for other users, and as a major employer.

- As a self-generator, Chevron has two areas of significant concern:
  - We have made major investments to take the majority of our electricity load off the utility system. Thus, we must prevent attempts by regulatory bodies and utilities to use those facilities as a source of revenue as if those facilities were part of the electricity grid. In addition, attempts by regulated entities or agencies to divert power generated by a cogeneration facility integral to a manufacturing process must be deflected to avoid damage to equipment or violations of warranties or permits.
  - Each of Chevron's cogeneration facilities is certified as a "Qualifying Facility" under federal statute and regulations. Chevron has contracts under which it has the ability to sell surplus electricity to regulated local utilities. We must ensure that prices paid for our surplus electricity adequately compensate for the costs to generate. The prices determined under the contracts and regulations must reflect prevailing wholesale market prices to avoid discriminatory pricing that discourages generating surplus.
- As a consumer, Chevron can maximize its contribution to reducing demand for electricity during the shortage period by:
  - Seeking changes in regulations that will allow our operations to participate more fully in "load-shedding" or "demand relief" programs offered by the utilities and/or the ISO. For example, there are air district rules precluding us from using standby generation in load-shedding programs.
  - Pursuing further conservation efforts at our operations. It is unlikely that the market will be allowed to send appropriate price signals during the transition period, so we may have to conserve more than prices would suggest if we are to assist the state in avoiding draconian measures triggered by Stage 3 emergencies.
  - Explore other alternatives to generate power at our facilities – through distributed generation, for example – and continue pursuing integrated distributed generation solutions for other businesses and institutions.

- As a provider of energy conservation/efficiency/management services to businesses and institutions, Chevron can continue offering other energy users opportunities to reduce their impact on the electric grid while lowering their operating costs.
- As an employer, Chevron can urge its employees to do their part to use electricity wisely both at the office and in the home. Chevron's current list of recommendations for conserving energy at the office can be enhanced and expanded to include tips for conserving energy at home. then actively communicated to employees.

2001-003874 Feb 9 p 5:24

ASCE

American Society of Civil Engineers

February 7, 2001

Washington Office
1015 15th Street, N.W., Suite 600
Washington, D.C. 20005-2605
(202) 789-2200
Fax: (202) 289-6797
Web: http://www.asce.org

Mr. Andrew D. Lundquist
Director
National Energy Policy Development Group
The White House
1600 Pennsylvania Avenue, NW
Washington, DC 20500

Dear Mr. Lundquist:

On behalf of the 126,000 members of the American Society of Civil Engineers (ASCE), the country's oldest national engineering organization, I am writing to express our strong support for the Administration's effort to develop a comprehensive national energy policy. Enclosed for your perusal are copies of all pertinent energy policy statements adopted by ASCE's Board of Direction.

Clearly all aspects of the energy issue need to be evaluated at this time, including exploration, development, production, transmission, environmental mitigation, R&D, and conservation. Energy production and transmission facilities are important components of the nation's vital infrastructure, which supports economic growth and the quality of life our citizens have come to expect. From the gasoline price spikes of last summer to the recent developments in California, the American people are growing more acutely aware of the need for reliable energy sources.

One particular concern is the matter of developing domestic energy resources on the coastal plain of the Arctic National Wildlife Refuge (ANWR). While ASCE believes it is a subjective value judgement of society as to whether it is in the national interest to maintain ANWR as a wilderness area or to allow environmentally sound oil exploration and development, it is our view that if ANWR is developed, it can and must be done in an environmentally responsible manner.

In closing for now, let me add that ASCE has hundreds of technical committees, many of which deal with aspects of the energy issue. ASCE also publishes the Journal of Energy Engineering. If we can be of any assistance, please contact Mr. Casey Dinges, ASCE Managing Director for Communications and Government Relations at (202) 789-2200 or cdinges@asce.org. Thank you for your attention.

Regards.

Sincerely,

James E. Davis, P.E.
Executive Director and CEO

Enclosures
cc (w/o enclosures):
Spencer Abraham
Norman Mineta
Paul O'Neill
Donald Evans
Ann Veneman
Major Thompson
Casey Dinges
Brian Pallasch
Bruce Gossett
Jon Esslinger

27708

NATIONAL COAL COUNCIL, INC.
1730 M Street, NW • Suite 907
Washington, DC 20036
PHONE: 202-223-1191
FAX: 202-223-9031

Website Address: nationalcoalcouncil.org

003695

February 7, 2001

2001-003695 2/8 A 9:29

The Honorable Spencer Abraham
Secretary of Energy
U.S. Department of Energy
Room 7A-219
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Mr. Secretary:

With the recent establishment of the National Energy Policy Development Task Force by President Bush, and your appointment by him to that Task Force, the members of The National Coal Council, Inc. thought it appropriate to share with you the enclosed brochure. You will see that it is a short and concise summary, using Council reports, outlining the role that coal plays in our nation's energy supply, economic strength and environmental protection.

The Council membership trusts you will find this information useful as the Task Force, under the chairmanship of Vice President Chaney, undertakes its work. The Council stands ready to assist you in this effort in whatever way you choose to ask.

Sincerely,

Robert A. Beck
Executive Director

003695

cc: The Honorable Richard Cheney
Vice President of the United States

2001 FEB -8 A 9:29

A Federal Advisory Committee to the U.S. Secretary of Energy

27709

COAL

the essential, secure, affordable, and environmentally compatible U.S. energy source

As a public advisory committee to the Secretary of Energy initially chartered in 1985, The National Coal Council has compiled 32 reports at the Secretary's request on numerous issues affecting coal and U.S. energy policy. The factual information in this paper, and the conclusions based thereon, are drawn from these studies and the documents used to compile them, all of which have been submitted to the Secretary of Energy.

Coal Fuels U.S. Economic Growth

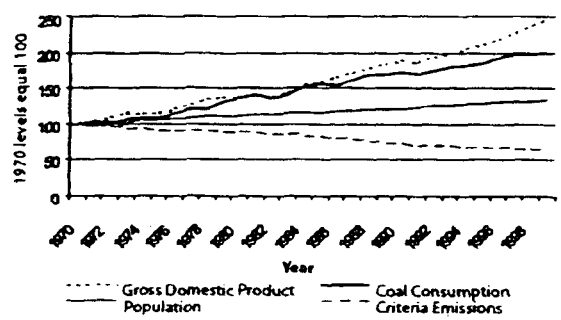
U.S. coal consumption has doubled since 1970, increasing from **520 million tons in 1970** to over **1 billion tons in 1999**, and the use of coal to generate electricity has increased nearly threefold in this period of time.

This increased coal use has helped the economy to more than double over the period, increasing 155 percent from $3.54 trillion (1996 dollars) in 1970 to $9.03 trillion (1996 dollars) in 1999.

Over the same period, U.S. population grew 33 percent, increasing from 205 million in 1970 to 273 million in 1999.

Nevertheless, over this period air emissions decreased more than 35 percent.

U.S. Coal, Emissions, Population, and Economy, 1970-1999

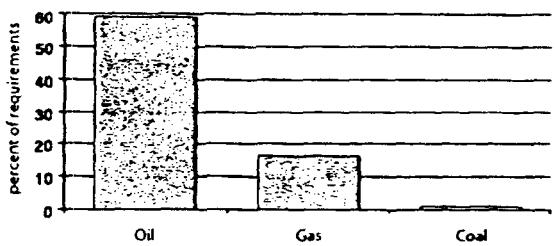


Given our economy's requirement for low cost, available electricity, increased coal use will be necessary to support economic and population growth and is compatible with a clean environment.

Coal is a Secure U.S. Domestic Energy Source

Virtually all of the coal used in this country is produced in the U.S.

U.S. Energy Imports - 1999



The U.S. currently imports virtually no coal, but imports 59 percent of its oil and 16 percent of its natural gas. Plus, domestic extraction and production of these two fuels faces challenges far greater than coal.

The U.S. thus has control over this energy resource: It is not subject to embargo or cartel-driven price increases by international suppliers.

The U.S. is in no danger of running out of coal: U.S. coal reserves are estimated to last, at current consumption rates, for nearly 500 years.

27710

Coal reserves are found in 38 states, and electricity generated from coal is consumed in all 50 states.

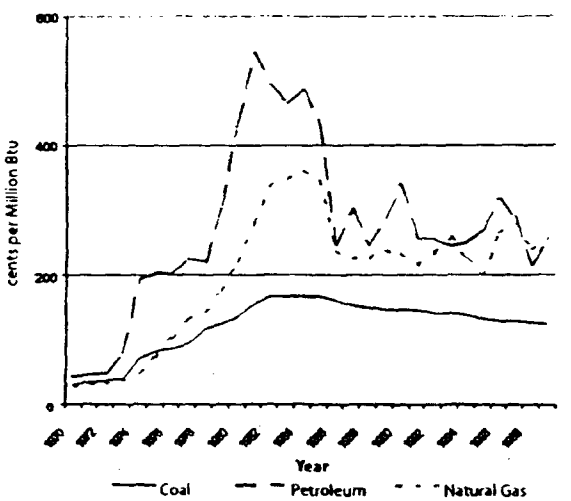
As Coal Use Increases, Coal Prices are Decreasing, Unlike the Prices of Other Fossil Fuels

Over the past two decades, coal use has increased 40 percent, from **740 million tons to over 1 billion tons by 1999**.

Over this same period, coal prices have decreased **20 percent, from $1.60 per MMBTU to $1.22 cents per MMBTU**.

Recent events show an even more dramatic price differential between coal and other fossil fuels.

Cost of Fuel for Electric Generation, 1970-1999

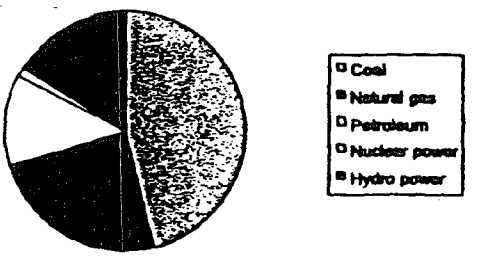


And, over the past three decades, the cost of coal for electric generation has been lower and less volatile than other fossil fuels used to generate electricity.

Coal is Essential for Electricity

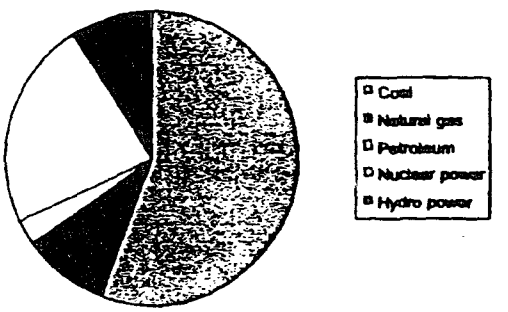
In 1970 coal accounted for the net generation of 46 percent of the electricity at US electric utilities.

1970



This contribution had increased to 55 percent by 1999.

1999



Coal will remain the primary fuel source for electricity generation in the U.S. for the foreseeable future.

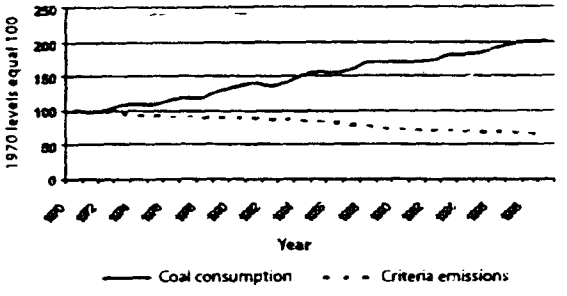
Electricity demand will increase exponentially as it is required to drive the economy of the future, including computers, the Internet, telecommunications, information, and related technologies.

Coal is Compatible With a Clean Environment

Even as coal use has increased rapidly, emissions in the U.S. have decreased significantly. Our air is cleaner.

Since the 1970 Clean Air Act, coal use in the U.S. has doubled.

U.S. Coal Consumption and Emissions, 1970-1999



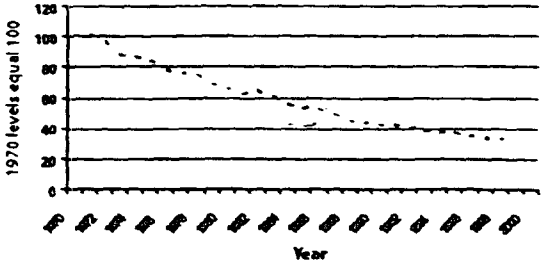
Nevertheless, over the same period of time, emissions, as measured by EPA for the six criteria pollutants (carbon monoxide, lead, nitrogen oxide, ozone, particulate matter, and sulfur dioxide) decreased more than 35 percent.

Coal Stays Committed to a Clean Environment

Over the past three decades, U.S. industry has invested over $50 billion in cutting edge clean coal and environmental technologies.

This investment has paid off: Research and development efforts produced technology advances that continue to reduce the emissions produced per unit of coal consumed. Currently the rate of emissions is only one-third of what it was in 1970 - a 70 percent improvement in environmental efficiency.

Emissions Per Ton of Coal Use, 1970-1999

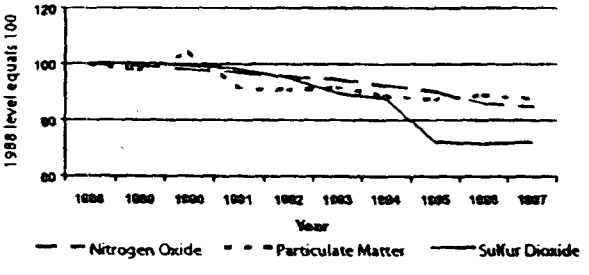


This commitment continues as coal research and development addresses future environmental challenges such as global climate change. Through a partnership with the U.S. Department of Energy, coal supports the "Vision 21" program to reduce emissions to near zero by 2020.

Specific Achievements in Reducing Emissions While Dramatically Increasing Coal Use

Over the last decade, sulfur dioxide emissions decreased **28 percent.**

U.S. Emissions Resulting from Coal, 1988-1997
(based on thousand short tons emitted per unit of consumption)



Nitrogen oxide emissions decreased **15 percent.**

Particulate matter emissions decreased **13 percent.**

Coal is Essential to Produce the Electricity Required to Drive Future U.S. Economic Growth

The U.S. economy requires more electricity to grow. Recently, U.S. electricity requirements have increased over **four percent annually**, and are forecast to increase nearly 35 percent within 20 years.

Coal will be required to help fuel this growth.

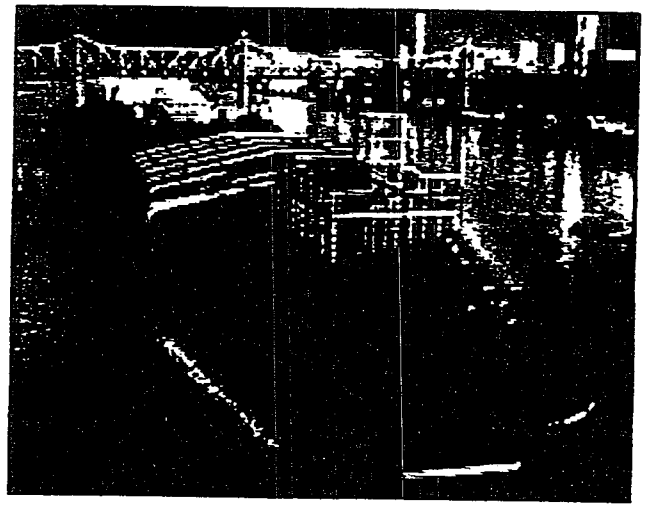
The use of coal to generate electricity has nearly tripled since 1970.

The U.S. Energy Information Administration forecasts that coal will continue to be the major source of U.S. electricity generation at least through 2020.

Coal Supports Vision 21 Plant

The future for coal is bright, and it will play a key role in the U.S. Department of Energy's Vision 21 program.

This effort expects to lead to a nearly pollution-free energy plant by the next decade. Emerging technologies allow consideration of coal as a "carbon ore" which can be used as a raw material not only to produce energy, but also as a source for valuable carbon-based products such as nanofibers, foams, and lightweight composites. Co-production of energy and carbon-based products can be achieved with almost zero environmental impact.



Artist's concept of Vision 21 pollution-free energy plant

Sources: *U.S. Department of Commerce, Bureau of the Census and Bureau of Economic Analysis; U.S. Department of Energy, Energy Information Administration; and U.S. Environmental Protection Agency information as used in previous reports of The National Coal Council, 1985-2000.*

Prepared for the The National Coal Council, Inc. by Management Information Services, Inc.; Washington, D.C., www.misi-net.com © 2001.

27713

2001-002182

Department of Energy
Washington, DC 20585
February 8, 2001

Mr. Richard L. Fillman
Chairman
PGC Process Gas Consumers
1275 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2415

Dear Mr. Fillman:

We have received your correspondence dated January 26, 2001, requesting a meeting with Secretary Spencer Abraham to discuss national energy policy.

We have forwarded your request to the Secretary's Office of Scheduling and Advance. A staff member from that office will notify you regarding the status of your request.

If you have any questions, please call Ms. Robyne Johnston at (202) 586-5534.

Sincerely,

James N. Solit
Director, Executive Secretariat

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27714

004565

National Rural Electric Cooperative Association
A Touchstone Energy® Cooperative

4301 Wilson Boulevard
Arlington, Virginia 22203-1860
Telephone: (703) 907-5500
TT-(703) 907-5957
www.nreca.org

2001-004565 2/15 P 4:14

February 12, 2001

The Honorable Spencer Abraham
U.S. Department of Energy
1000 Independence Ave., SW
Washington, D.C. 20585

Dear Secretary Abraham.

Congratulations on your confirmation as the new Secretary of Energy! You have accepted one of the most challenging and exciting jobs in government today, leading the government's efforts to secure America's energy future.

As you know, energy is the fundamental driver of our economy and key to U.S. global competitiveness. Affordable, reliable energy is necessary for the well-being of all Americans.

The National Rural Electric Cooperative Association represents more than 900 electric cooperatives serving 34 million people in 46 states. Electric cooperatives generate 64 percent of the power for our consumers and purchase the rest. Cooperatives are consumer-owned and have proved to be an effective business model for people to provide themselves with reliable, affordable, and safe electric power.

As generators and consumers of electricity, we are vitally concerned with the direction of energy policy in this country. To ensure adequate supplies of electricity as the national demand grows, we need policies that emphasize the contribution of a diversity of fuels including coal, natural gas, nuclear power, hydroelectricity, and renewables. We need to increase our investments in science in areas such as clean coal so that we will have technologies that produce clean energy, improve energy efficiency and conservation, and enhance our economic competitiveness. And we need to address difficult issues like the disposal of nuclear waste.

I look forward to working with you as the nation addresses this critical issue. In crafting a new energy policy, we have the opportunity to improve the lives of every man, woman, and child in this country.

Sincerely,

Glenn English
Chief Executive Officer

27715

2001-004430 Feb 14 p 4:16

STANLEY C. HORTON
CHAIRMAN

February 12, 2001

The Honorable Spencer Abraham
Secretary of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Abraham:

I am writing to commend your early actions and leadership to help develop a cohesive energy policy for the U.S. and North America. INGAA members include interstate natural gas pipelines in the U.S., interprovincial pipelines in Canada and PEMEX in Mexico.

Your proposal to seek ways to burn coal cleaner in electric generating plants is commendable and I would like to offer the services of the natural gas pipeline industry to achieve this goal. Several years ago, the department, through your clean coal technology program, explored possible co-firing of coal and natural gas together as a means of emissions reduction. A co-firing demonstration program at an eastern utility coal-fired power plant showed much promise as a means of dramatically reducing sulfur dioxide and oxides of nitrogen emissions.

Furthermore, a study by INGAA showed that the 10 worst polluting coal-fired power plants in the U.S. all were within two miles of natural gas pipelines. Unfortunately, electric utilities did not embrace this technology for a variety of reasons.

As DOE renews its focus on clean-burning coal, I offer our assistance again to explore using coal and natural gas together as a cleaner burning fuel in this time of energy supply shortages.

I would be pleased to meet with you or your staff to discuss this proposal in more detail.

Sincerely,

Stanley C. Horton

INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA
10 G STREET, N.E., SUITE 700 • WASHINGTON, D.C. 20002 • 202/216-5901 • FAX 202/216-0870

27716

CMS ENERGY

An International Energy Company

2001-004242 2/13/01 9:46am

David G. Mengebier
Vice President
Governmental and International Affairs

February 12, 2001

The Honorable Spencer Abraham
Secretary
U.S. Department of Energy
Washington, DC 20585

By Fax: (202) 586-6210

REQUEST FOR MEETING ON THURSDAY, MARCH 1 REGARDING ENVIRONMENT, R&D AND ENERGY ISSUES AFFECTING COAL-BASED ELECTRIC GENERATION

Dear Secretary Abraham:

I am writing today to request a personal meeting with you on Thursday, March 1 between the hours of 9:00 am and 5:00 pm. Those in attendance would be William T. McCormick, Chairman and CEO of CMS Energy, Irl Engelhardt, Chairman and CEO of Peabody Coal as well as several other CEOs from the investor-owned utility, rural electric cooperative, coal and rail industries. Messrs. McCormick and Engelhardt co-chair an informal coalition of these industries advocating the public policy interests of coal-based generation.

We would appreciate the opportunity to meet with you for approximately 30 minutes. We will follow up with your appointments secretary to confirm the most suitable time on March 1.

With best regards,

David

David G. Mengebier

Bill McCormick would also appreciate some time with the Secretary prior to this meeting, if possible

1016 16th Street, NW • 5th Floor • Washington, DC 20036 • Tel: 202 293 5794 • Fax 202 223 6178

27717

004555

American Association of Petroleum Geologists

An International Geological Organization

2001-004555 2/15 P 4:17

February 12, 2001

MARLAN W. DOWNEY
AAPG President
5902 Yardley Court
Dallas, TX 75248
Phone: (972) 713-8634
Fax: (972) 713-0335
E-mail: marlandowney@mindspring.com

The Honorable Spencer Abraham
Secretary of Energy
United States Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

Dear Secretary Abraham,

As I write, our Nation faces an ever-growing production shortage of domestic oil and ever increasing imports of foreign oil. This dependence holds America hostage. Natural gas, the environmentally desirable alternative to coal and oil for electric generation and domestic use, has dramatically risen in price. Demand is soaring much faster than supplies can be discovered, permitted, developed, and transported to the U.S. market. We need an effective United States energy policy.

The world and the U.S. will face severe shortages in the next fifty years, perhaps much sooner. Although the United States is blessed with substantial oil and gas production, have a very large natural gas resource base and a large oil resource base, the sad fallout of no policy is around us everyday. Consumers are faced with threats of fuel price spikes, fuel curtailments, brownouts, and skyrocketing energy prices, the net results of the lack of a coherent policy.

The American Association of Petroleum Geologists (AAPG), with other scientific professional and learned societies representing more than 100,000 professional energy scientists, engineers, and other resource specialists, is convening a one-day conference in Washington, DC, on April 23, 2001, to address the need for a national energy policy. Expert individual presentations and panel discussions will address the rationale, necessary elements, and the structure needed to develop a national energy policy.

I invite you to speak at this important conference on April 23, 2001, at the Army and Navy Club Farragut Square, 901 17th Street N.W. We could schedule your talk in the morning or afternoon for your convenience. This is an important endeavor and your participation would be most beneficial for a successful outcome.

Please contact our conference coordinator, Dr. Lee Gerhard, former State Geologist of Kansas with your response. Lee can be reached at (785) 864-3965, fax: (785) 864-5317 or e-mail: lgerhard@ukans.edu. Thank you!

Sincerely yours,

Marlan W. Downey

Marlan W. Downey

abraham.energyconf
mcg

STATE OF NEBRASKA

DEPARTMENT OF AGRICULTURE
Merlyn Carlson
Director

2001-004441 Feb 14 p 5:03

February 14, 2001

Mike Johanns
Governor

The Honorable Spencer Abraham
United States Department of Energy
1000 Independence Ave SW
Washington, DC 20585

Dear Secretary Abraham:

I plan to be in Washington March 19-20 with members of the Nebraska Department of Agriculture's Director's Advisory Panel on Agriculture. As part of that visit, we would like to schedule a meeting with you, or a representative of your office, to discuss agriculture-energy policy issues. We would like to address topics such as the direction of the U.S. energy policy under President Bush; the increase of fuel and natural gas prices and what, if anything, can be done to moderate those prices; and the potential role of agriculture in serving America's energy needs.

The Director's Advisory Panel is comprised of persons Governor Mike Johanns and I look to for advice on agricultural issues. All panel members play important roles in Nebraska agriculture. I think you will find these members of the Director's Advisory Panel are well-versed in agricultural policy and could offer valuable discussion.

Panel members traveling to Washington with me and Deputy Director Greg Ibach are Phil Hardenburger, past president of the Nebraska Pork Producers; Norman Husa, United Soybean Board; Alan Janzen, past president of the Nebraska Cattlemen; Rodney Hassebrook, past president of the Nebraska Corn Board; Keith Olson, first vice president of the Nebraska Farm Bureau; and Paul Warfield, First National Bank of Omaha. Stan Garbacz, Ag Promotion and Development administrator of the Nebraska Department of Agriculture, plans to attend also.

We request one-half to one hour of your time for our discussion on either Monday, March 19, or Tuesday, March 20. Currently, we have a number of openings in our schedule that can be considered by calling Bobbie Kriz-Wickham at (402) 471-6860. She can provide you with further information about our trip. I look forward to hearing from you.

Sincerely,

DEPARTMENT OF AGRICULTURE

Merlyn Carlson
Director

02DAFabraham-01

DEPARTMENT OF AGRICULTURE, 301 CENTENNIAL MALL SOUTH
Website: www.agr.state.ne.us

Administration
P.O. Box 94947
Lincoln, NE 68509-4947
(402) 471-2341
FAX: (402) 471-2759

Agriculture Laboratories
3703 South 14th Street
Lincoln, NE 68502-5399
(402) 471-2176
FAX: (402) 471-0091

Bureau of Animal Industry
P.O. Box 94787
Lincoln, NE 68509-4787
(402) 471-2351
FAX: (402) 471-6893

Bureau of Dairies & Foods
P.O. Box 95064
Lincoln, NE 68509-5064
(402) 471-2536
FAX: (402) 471-2759

Bureau of Plant Industry
P.O. Box 94756
Lincoln, NE 68509-4756
(402) 471-2394
FAX: (402) 471-6892

Weights and Measures
P.O. Box 94757
Lincoln, NE 68509-475
(402) 471-4292
FAX: (402) 471-2759

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27719

NEI

NUCLEAR ENERGY INSTITUTE

Joe F. Colvin
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

2001-004519 Feb 15 P1:23

February 15, 2001

The Honorable Spencer Abraham
Secretary
Department of Energy
Forrestal Building
1000 Independence Ave., SW
Washington, DC 20585

Dear Secretary Abraham:

On behalf of the nuclear energy industry, I would like to request the opportunity to meet with you at your earliest convenience to discuss nuclear energy's important role in national energy policy. Nuclear energy provides 20 percent of our nation's electricity safely, reliably, and competitively. Importantly, it is also our largest source of emission-free electricity.

I will be accompanied by several of the Chief Executive Officers of major utilities who are members of NEI and can speak first hand about the tremendous opportunities presented by nuclear technology. Please call me or have your staff contact Mr. John Kane, Vice President of Government Affairs, at (202) 739-8060 if we can answer any questions.

I thank you for your consideration of this request, and look forward to meeting with you to discuss these important and timely matters.

Sincerely,

Joe F. Colvin

1776 I STREET, NW SUITE 400 WASHINGTON, DC 20006-3708 PHONE 202 739 8075 FAX 202 785 1898

27720

Carter, Douglas

From: Anderson, Margot
Sent: Thursday, February 15, 2001 7:34 PM
To: Carter, Douglas
Subject: FW: DOI energy insert -- section 5

en010215 energy materrial inse...

Doug,

These comments are from DOI - can you find a home for them in chapter 5?

Margot

-----Original Message-----
From: Kelliher, Joseph
Sent: Thursday, February 15, 2001 7:30 PM
To: Anderson, Margot
Subject: FW: DOI energy insert -- section 5

Suggestions from DOI

-----Original Message-----
From: Tom_Fulton@ios.doi.gov%internet [mailto:Tom_Fulton@ios.doi.gov]
Sent: Thursday, February 15, 2001 5:37 PM
To: Kelliher, Joseph
Subject: DOI energy insert -- section 5

----- Forwarded by Tom Fulton/SIO/OS/DOI on 02/15/2001 05:30 PM -----

	William Bettenberg	To: Tom Fulton/SIO/OS/DOI@DOI
		cc: Benjamin Simon/PPA/OS/DOI@DOI, Theodore Heintz/PPA/OS/DOI@DOI, Indur Goklany/PPA/OS/DOI@DOI
	02/15/2001 05:07 PM	Subject: energy -- section 5

Here's the second attempt.

(See attached file: en010215.energy materrial insert section 5--v2.wpd)

27721

- 005333

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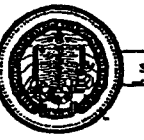

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February 16, 2001

The Honorable Richard Cheney, Vice President
The White House
1600 Pennsylvania Avenue, N.W.
Washington, DC 20500

Dear Vice President Cheney:

We applaud your efforts as you begin a comprehensive review of U.S. energy policy. This critical initiative is long overdue, and is particularly relevant today as the California energy crisis illustrates the deficiencies in regional and national energy policy and planning. Additionally, as the threat of global climate change is becoming widely acknowledged in the U.S. there is a growing understanding that a responsible national energy policy includes a global climate change mitigation strategy that can be environmentally effective and economically advantageous.

We are concerned that the current crisis mentality pervading the discussions of energy issues in the country has fostered an ill-founded rush for "quick fix" solutions that, while politically expedient, will ultimately do the country more harm than good. It is critical to examine all energy options. The potential for renewable energy technologies and energy efficiency to have a significant positive impact on our energy future is such an example of an opportunity that demands far greater examination and commitment to implementation than we have seen to date.

In the last decade the case for renewable energy has become compelling economically, socially, and environmentally. For many years renewables were seen as environmentally and socially attractive options that at best occupied niche markets due to barriers of cost and available infrastructure. That situation has dramatically changed. Renewable energy resources and technologies – notably solar, wind, small-scale hydro, and biomass based energy, as well as advanced energy conversion devices such as fuel cells – have undergone a revolution in technological innovation, cost improvements, and in our understanding and analysis of appropriate applications. There are now a number of energy sources, conversion technologies, and applications, where renewable energy options are either equal,

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or better, in price, and equal, or better, in services provided than are the prevailing coal, oil, and gas technologies. For example, in a growing number of settings in industrialized nations, wind energy is now the *least cost* option across *all* energy technologies with the added benefits of being quick to install and bring on-line, and modular. In fact, some farmers in the Midwest can generate more income per hectare from the electricity generated by a wind turbine on their land than from their crop or ranching proceeds. Furthermore, photovoltaic panels and solar hot water heaters placed on buildings and houses across America could help reduce consumers' energy costs, produce a healthier living environment, and increase our energy supply while stabilizing our energy demand.

California's energy crisis has recently caught the national attention and raised fundamental questions about regional and national energy strategies. Rising demand suggests the need for new energy supplies, and certainly some new energy capacity is needed. However, there is a wide range of options for achieving supply and demand balance, and some of these options are not being given adequate attention. Governor Davis in California is now emphasizing policies that put the state into the position of brokering power purchases. Not only is this unlikely to be economically efficient, it fails to address the underlying problems of market manipulation and under-investment in capacity expansion of new, clean, technology development and installation. We believe that statewide, public sector investment in renewable energy generation, combined with increased municipal control of electricity production and retail sales, would offer a better and more meaningful long-term solution to the problems that electricity deregulation has raised.

In general, the absence of past state and federal leadership has meant that we have seen too few incentives for energy conservation and efficiency measures, little attention to appropriate power plant siting issues, and lack of long-term concern for transmission and distribution bottlenecks. At the national level drilling for oil in Alaska's Arctic National Wildlife Refuge is one step that could be taken to increase oil supplies. Yet, it would have a *negligible* affect on electricity production, and would not significantly reduce oil prices, improve energy security, or alleviate the trade deficit. Any oil and gas found will be trivial in comparison with global production and long-term U.S. consumption. This combined with the economic and environmental costs of such a proposal make disrupting the Arctic Refuge an unnecessary step, and illustrate a lack of integrated energy planning.

We firmly believe that the ultimate solutions to meeting our nation's energy needs must be based on private sector investment, bolstered by well-targeted government support such as tax incentives for emerging energy technologies and R&D. This must be coupled with policies that *open* markets to new generating capacity, rather than through federal subsidies for programs to increase energy supply using already mature technologies. This latter strategy would only generate near-term and incremental paybacks, while doing little to promote energy security or advance social and environmental goals. Instead, we now have the opportunity to build a sustainable future by engaging and stimulating the tremendous innovative and entrepreneurial capacity of the U.S. private sector. To accomplish this, we must develop policies that guarantee a stable and predictable economic environment for advancing clean energy technologies. This can be further bolstered by market incentives to reward actions that advance the public good. The Federal Energy Task Force has the opportunity to clarify federal policies, build a sustainable energy research base, encourage state and regional initiatives, and build dynamic markets and industries focused on clean energy options. With these thoughts in mind, we present several options that address both the short-term need to increase

energy supply and the long-term goal to have a sustainable, economic and environmentally sound U.S. energy policy.

- **Increase federal R&D funding for renewable energy and energy efficiency technologies.** To date, federal investment in renewable energy and energy efficient technologies has been sparse and erratic, with each year producing an appropriations battle that is often lost. The resulting financial and policy uncertainty discourages effective energy technology development and deployment in the marketplace. With energy now a clear national priority, funding for the U.S. Department of Energy's Energy Efficiency and Renewable Energy Program must be substantially and systematically increased. The realization that R&D funding provides a critical driver to economic growth resulted in important commitments, particularly in the life sciences, to doubling R&D funding in five years. The same return on investment exists in the energy sector, but it has not been translated into similarly increased R&D funding for new renewable and energy efficiency technologies. If the U.S. expects to be a world leader in this industry, as it is in the biomedical and high-tech sectors, such investments in renewable energy and energy efficiency are essential. (See Appendix, Note 1)

- **Provide tax credits in addition to tax cuts for companies developing and using renewable energy and energy efficiency technologies.** The R&D tax credit has proven remarkably effective and popular with private industry, so much so that there is a strong consensus in both Congress and the Administration to make this credit permanent. Clean energy must be a national priority, and given the importance of private sector R&D in commercializing new technologies, an additional tax incentive for R&D investment in renewable and energy efficiency technologies is exactly the type of well-targeted federal policy that is needed. Furthermore, tax incentives directed toward those who use the technologies would provide the 'demand pull' to accelerate the technology transfer process and rate of market development. The U.S. has largely lost its position as the global leader in energy innovation resulting in the loss of jobs and earning potential for U.S. companies precisely at the time when the international market for clean energy technologies is booming. Our domestic industries as well as the global energy economy would both benefit directly from a renewed commitment to U.S. clean energy leadership.

- **Institute improved efficiency standards for residential and commercial water heating and space heating and cooling, and motors and appliances.** Significant advances in heating and cooling system efficiency, and for motors and many appliances, have been made, but more improvements are technologically possible and economically feasible. A clear federal statement of desired improvements in system efficiency is needed to remove uncertainty and reduce the economic costs of implementing these changes. If such a federal mandate existed then efficiency standards for heating and cooling, and for motors and appliances would begin to gradually increase, helping to expand the market share of existing high efficiency systems, as well as spurring a wealth of further improvements. (See Appendix, Note 2)

- **A federal renewable portfolio standard (RPS) to help build renewable energy markets.** The RPS is a renewable energy content standard, akin to efficiency standards for vehicles and appliances that have proven successful in the past. A gradually increasing RPS is an economic way of ensuring that a growing proportion of electricity sales are provided by renewable energy, and is designed to integrate renewables into the marketplace in the most cost-effective fashion.

In this manner, the market picks the winning and losing technologies and projects, not administrators. We recommend a 20 – 25 percent renewable energy component within ten to fifteen years, using market dynamics to stimulate innovation through an active trading program of renewable energy credits. (See Appendix, Note 3)

- **Federal standards for net metering of distributed small-scale energy generation.** Net metering allows customers to interconnect and feed surplus power back into the grid during periods when generation exceeds the customer's own use. Such a system makes it easier and more affordable for customers to generate their own power from renewable energy sources or other distributed generation technologies. The use of net metering benefits customers, utilities, and independent power providers, and is particularly important for intermittent renewable sources, such as solar and small wind machines, which generate electricity only when the resource is available. A uniform federal standard is needed to replace the confusing and disparate array of state net metering programs currently in existence. (See Appendix, Note 4)

- **Form a National Public Benefits Fund based on revenue collected from a national, competitively neutral wires charge.** Such a fund could match state funds to assist in continuing or expanding energy efficiency, low-income services, the deployment of renewables, research and development, and similar public purpose programs the costs of which have traditionally been incorporated into electricity rates by regulated utilities. As the utilities have moved toward deregulation such public benefit funds have been disappearing.

- **Improve federal standards for vehicle fuel economy.** New hybrid vehicle technologies are beginning to enter the marketplace, offering significant improvements in vehicle fuel economy at modest incremental vehicle costs. Looking beyond the initial wave of gasoline hybrid vehicles, fuel cell vehicles are currently under active development by all of the large automakers and promise even higher efficiencies and still lower emission levels. The improvements in fuel economy that these new vehicle types offer would help to slow growth in petroleum demand, reducing our oil import dependency and trade deficit. While the Partnership for a New Generation of Vehicles helped to generate some vehicle technology advances, an increase in the Corporate Average Fuel Economy (CAFE) standard is required to provide an incentive for companies to bring these new vehicles rapidly to market. The potential for future hybrid and fuel cell vehicles to achieve over 100 miles per gallon is believed to be both technically and economically viable in the near-term, and needs only clear federal guidelines and support to move from planning to reality. (See Appendix, Note 5)

- **Integrate domestic energy and environmental planning with U.S. global leadership.** The need for leadership on the global climate issue has become particularly apparent with the lack of international cooperation at the recent climate meeting in The Hague. Past domestic political opposition to U.S. leadership in this area was based on outdated views of the science and economics of climate change. It is now widely understood that the costs of inaction on global warming can be catastrophic, while the benefits of actions to reduce the environmental impacts of energy use through new innovation, developing clean energy industries, and improving domestic air quality and health can be substantial. This represents the classic 'win-win' scenario. Significant action on climate change mitigation now appears unlikely unless the U.S. takes on a significant leadership role. (See Appendix, Note 6)

If we hope to enjoy the type of prosperity in the coming century as we have in the past the work of the Task Force on Energy in formulating a new national energy policy must be carried out with careful consideration. We commend you for this auspicious undertaking and would be happy to elaborate further on any of the points raised above. Thank you for the opportunity to weigh in at this critical juncture in our country's history.

Sincerely,

Professor Daniel M. Kammen, Director
Renewable and Appropriate Energy Laboratory
Email: dkammen@socrates.berkeley.edu

Dr. Antonia V. Herzog
University of California President's Postdoctoral Fellow
Email: aherzog@socrates.berkeley.edu

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Cc:
Spencer Abraham, Secretary of Energy
Governor Gray Davis, Governor of California
Rosina Bierbaum, Acting Director, Office of Science and Technology Policy
Senator **Frank H. Murkowski**, Chairman, Senate Committee on Energy and Natural Resources
Senator **Jeff Bingaman**, Ranking Member, Senate Committee on Energy and Natural Resources
Hon. W.J. "Billy" Tauzin, Chairman House, Committee on Energy and Commerce
Hon. John D. Dingell, Ranking Member House, Committee on Energy and Commerce

Appendix: Supporting Materials and References

Many of the publications listed below are available on line at the Renewable and Appropriate Energy Laboratory's (RAEL) Internet site. The *Publications Page* is: http://socrates.berkeley.edu/~rael/papers.html

Note 1: Federal R&D funding for renewable energy and energy efficiency technologies

Federal funding and leadership for renewable energy and energy efficiency projects has resulted in a small number of notable successes, such as the *Energy Star* and *Green Lights Programs* that has now been emulated in a number of countries. Despite these achievements, funding in this area has been both scant, and so uneven that private sector involvement has been actually discouraged. A combination of a federal program for steadily increasing funding and active political leadership would transform the clean energy sector from a good idea to a pillar of the new economy. In particular, promising technologies such as fuel cells deserve special attention. Fuel cell development is attracting significant public and private funding and offers the promise of being a keystone technology for the ultimate transition from natural gas, petroleum, and coal energy to a renewable and hydrogen based energy economy.

Duke, R. D., and Kammen, D. M. (1999), "The economics of energy market transformation initiatives", *The Energy Journal*, **20**, pages 15 – 64.

Kammen, D. M. and Margolis, R. M. (1999) "Evidence of Under-Investment in Energy R&D Policy in the United States and the Impact of Federal Policy," *Energy Policy*, **27** pages 575 - 584.

Margolis, R. M. and Kammen, D. M. (1999) "Underinvestment: The Energy Technology and R&D Policy Challenge," *Science*, **285**, pages 690 - 693.

President's Committee of Advisors on Science and Technology (PCAST) (1997) *Federal Energy Research and Development for the Challenges of the Twenty-First Century* (Washington, D.C.: Energy Research and Development Panel, President's Committee of Advisors on Science and Technology), November.

A second, and related issue is the structure of the Department of Energy itself. We have hindered, even crippled, the ability of the Department of Energy to investigate, promote and champion innovation in the energy sector by focusing much of its activities on the clean-up of the legacy of nuclear energy research and waste. While this is an important mission, it dominates the resources of the Department of Energy and prevents the focus from moving to current and future energy needs and opportunities. A separation of these functions is in order.

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Note 2: Efficiency standards for residential and commercial water heating and space heating and cooling, and motors and appliances.

A confluence of technical advances and economic and policy mechanisms now exists that could be utilized to dramatically reduce domestic, commercial and industrial energy needs. Federal leadership and partnership programs with state and regional organizations could produce dramatic improvements and cost reductions.

Interlaboratory Working Group (2000) *Scenarios for a Clean Energy Future* (Oak Ridge, TN; Oak Ridge National Laboratory and Berkeley, CA; Lawrence Berkeley National Laboratory), ORNL/CON-476 and LBNL-44029, November.

Note 3: A federal Renewable Portfolio Standard

All federal RPS proposals should use tradable renewable energy credits for compliance. Renewable credit trading is analogous to the sulfur allowance trading system established in the Clean Air Act. Like emissions trading, it is designed to be administratively simple and to increase flexibility and decrease the cost of compliance with the standard. Electricity suppliers can generate renewable electricity themselves, purchase renewable electricity and credits from generators, or buy credits in a secondary trading market.

The RPS is the surest mechanism for securing the public benefits of renewables and for reducing their cost to enable them to become more competitive. It is a market mechanism, setting a uniform standard and allowing companies to determine the best way to meet it. The RPS will reduce renewable energy costs by:

- Providing a revenue stream that will enable manufacturers and developers to obtain reasonable cost financing and make investments in expanding capacity to meet an expanding renewable energy market.
- Allowing economies of scale in manufacturing, installation, operation and maintenance of renewable energy facilities.
- Promoting vigorous competition among renewable energy developers and technologies to meet the standard at the lowest cost.
- Inducing development of renewables in the regions of the country where they are the most cost-effective, while avoiding expensive long-distance transmission, by allowing national renewable energy credit trading.
- Reducing transaction costs, by enabling suppliers to buy credits and avoid having to negotiate many small contracts with individual renewable energy projects.

Clemmer, S.L., Nogee, A., and Brower, M. (1999) "A Powerful Opportunity: Making Renewable Electricity the Standard," Union of Concerned Scientists, January.

Note 4: Federal standards for net metering

Net metering eliminates the administrative expense of installing, reading, and billing for an additional meter to measure generation separately from consumption. During surplus generation

periods, the single meter spins backwards, so that the customer is billed only for the net amount of electricity consumed during a billing period. By facilitating small-scale generation by customers, net metering will help reduce loads on central generation, transmission and distribution, enhancing reliability as well as fuel diversity.

Wan, Y. (1996) *Net Metering Programs*, NREL/SP-460-21651, National Renewable Energy Laboratory, December.

Note 5: Improved federal standards for vehicle fuel economy

After five years of Congressional bans, studies on the potential for increases in CAFE standards to cost-effectively reduce petroleum demand are now underway by the Department of Transportation and the National Academy of Sciences. These studies, with results due in July 2001, will help to suggest optimal levels of increased standards, given the costs and benefits of higher fuel economy, as well as phase-in schedules that will protect the competitive interests of domestic automakers. The issue of raising CAFE standards is becoming increasingly relevant with progress in the PNGV program, and as several automakers are preparing to introduce high-efficiency fuel cell vehicles beginning as soon as 2003-2004.

Duleep, K. G. (1997) "Evolutionary and Revolutionary Technologies for Improving Fuel Economy," *Transportation, Energy, and Environment: How Far Can Technology Take Us?*, Edited by J. DeCicco and M. Delucchi, ACEEE, Washington, D.C.

Mark, J. (1999) "Greener SUVs: A Blueprint for Cleaner, More Efficient Light Trucks," Union of Concerned Scientists, July.

Office of Technology Assessment (1995) *Advanced Vehicle Technology: Visions of a Super-Efficient Family Car*, OTA-ETI-638, Office of Technology Assessment, U.S. Congress, Washington, D.C., September.

Note 6: Climate change and the need for federal leadership

The U.S. can reduce greenhouse gas (GHG) emissions while improving our economic efficiency, creating jobs and saving consumers money, maintaining our technological leadership, and achieving other environmental benefits. The options presented in this letter not only represent a responsible energy strategy, but can also simultaneously address the need to reduce U.S. GHG emissions. In particular, they would support a range of strategies to reduce power plant emissions, which account for a substantial percentage of total U.S. emissions of greenhouse gases, 29 percent in 1998. These include switching from our current reliance on high-carbon fossil fuels, particularly coal and oil, to renewable fuel sources, which have zero carbon emissions, and lower-carbon natural gas; and increasing the efficiency of electricity generation and use.

We strongly support the recent initiatives in Congress, for which the current Administration has indicated it's backing, to reduce pollutant emissions from electricity generation. In the 106th Congress Senator Jeffords and Senator Lieberman introduced, S.1369, the Clean Energy Act of

1999. This legislation contained provisions that addressed the environmental damage and competitive distortions created by the patchwork of unequal and inadequate standards that currently apply to electric power plants nationwide. The bill put a national cap on emissions from all power plants of nitrogen oxides, sulfur oxides, mercury, and carbon dioxide. The reductions in carbon dioxide would have brought emissions levels back to 1990 levels by 2005, the same level implied by the non-binding targets of the Rio Treaty of 1992, as ratified by the U.S. Senate. Legislation that controls the four major power plant pollutants in an integrated package will help reduce uncertainties for electric generators and will be less costly than separate programs for each pollutant. Integrated control encourages system-wide efficiency improvements and increased utilization of cleaner fuels. And while voluntary action by American companies is an attractive option to consider, in the last ten years voluntary actions have failed to reduce carbon dioxide emissions in the U.S. Instead, emissions have increased by 15 percent since 1990 and continue to increase.

Baer, P., Harte, J., Haya, B., Herzog, A.V., Holdren, J., Hultman, N.E., Kammen, D.M., Norgaard, R.B., and Raymond, L. (2000) "Equity and Greenhouse Gas Responsibility," *Science*, **289**, page 2287.

Interlaboratory Working Group (2000) *Scenarios for a Clean Energy Future*, (Oak Ridge, TN; Oak Ridge National Laboratory and Berkeley, CA; Lawrence Berkeley National Laboratory), ORNL/CON-476 and LBNL-44029, November.

IPCC (Intergovernmental Panel on Climate Change) (2001) *Climate Change 2001: The Scientific Basis*, January.

Kinzig, A. P. and Kammen, D. M. (1998) "National trajectories of carbon emissions: Analysis of proposals to foster the transition to low-carbon economies", *Global Environmental Change*, **8 (3)**, pages 183 - 208.

Natural Resources Defense Council (2001) *A Responsible Energy Policy for the 21st Century*, February.

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To:	Secretary Abraham	Fax:	202-586-4403
From:	Kammen et al., RAEL	Date:	2/16/01
Re:	National Clean Energy Strategy	Pages:	10
CC:	List		

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Spencer Abraham
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585-0705

Dear Secretary Abraham,

I am writing to applaud the formation of the Federal Task Force on Energy. The mission of the Task Force is critical to both the economic and environmental future of the nation.

I am pleased to have the opportunity to submit the attached letter that presents a series of observations and policy recommendations that my colleagues and I hope the Task Force will find useful. A copy of this letter will also be sent by email and first class mail.

My colleagues and I would be pleased to discuss these issues further should that be of use to the Task Force, the Department of Energy, or other federal agencies.

Sincerely,

Daniel M. Kammen
Associate Professor of Energy and Society
Energy and Resources Group
University of California, Berkeley

Cc: The Hon. Richard Cheney, Vice President
Governor Gray Davis, Governor of California
Rosina Bierbaum, Acting Director, Office of Science and Technology Policy
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In this manner, the market picks the winning and losing technologies and projects, not administrators. We recommend a 20 – 25 percent renewable energy component within ten to fifteen years, using market dynamics to stimulate innovation through an active trading program of renewable energy credits. (See Appendix, Note 3)

- **Federal standards for net metering of distributed small-scale energy generation.** Net metering allows customers to interconnect and feed surplus power back into the grid during periods when generation exceeds the customer's own use. Such a system makes it easier and more affordable for customers to generate their own power from renewable energy sources or other distributed generation technologies. The use of net metering benefits customers, utilities, and independent power providers, and is particularly important for intermittent renewable sources, such as solar and small wind machines, which generate electricity only when the resource is available. A uniform federal standard is needed to replace the confusing and disparate array of state net metering programs currently in existence. (See Appendix, Note 4)

- **Form a National Public Benefits Fund based on revenue collected from a national, competitively neutral wires charge.** Such a fund could match state funds to assist in continuing or expanding energy efficiency, low-income services, the deployment of renewables, research and development, and similar public purpose programs the costs of which have traditionally been incorporated into electricity rates by regulated utilities. As the utilities have moved toward deregulation such public benefit funds have been disappearing.

- **Improve federal standards for vehicle fuel economy.** New hybrid vehicle technologies are beginning to enter the marketplace, offering significant improvements in vehicle fuel economy at modest incremental vehicle costs. Looking beyond the initial wave of gasoline hybrid vehicles, fuel cell vehicles are currently under active development by all of the large automakers and promise even higher efficiencies and still lower emission levels. The improvements in fuel economy that these new vehicle types offer would help to slow growth in petroleum demand, reducing our oil import dependency and trade deficit. While the Partnership for a New Generation of Vehicles helped to generate some vehicle technology advances, an increase in the Corporate Average Fuel Economy (CAFE) standard is required to provide an incentive for companies to bring these new vehicles rapidly to market. The potential for future hybrid and fuel cell vehicles to achieve over 100 miles per gallon is believed to be both technically and economically viable in the near-term, and needs only clear federal guidelines and support to move from planning to reality. (See Appendix, Note 5)

- **Integrate domestic energy and environmental planning with U.S. global leadership.** The need for leadership on the global climate issue has become particularly apparent with the lack of international cooperation at the recent climate meeting in The Hague. Past domestic political opposition to U.S. leadership in this area was based on outdated views of the science and economics of climate change. It is now widely understood that the costs of inaction on global warming can be catastrophic, while the benefits of actions to reduce the environmental impacts of energy use through new innovation, developing clean energy industries, and improving domestic air quality and health can be substantial. This represents the classic 'win-win' scenario. Significant action on climate change mitigation now appears unlikely unless the U.S. takes on a significant leadership role. (See Appendix, Note 6)

If we hope to enjoy the type of prosperity in the coming century as we have in the past the work of the Task Force on Energy in formulating a new national energy policy must be carried out with careful consideration. We commend you for this auspicious undertaking and would be happy to elaborate further on any of the points raised above. Thank you for the opportunity to weigh in at this critical juncture in our country's history.

Sincerely,

Daniel M. Kammen

Professor Daniel M. Kammen, Director
Renewable and Appropriate Energy Laboratory
Email: dkammen@socrates.berkeley.edu

Antonia Herzog

Dr. Antonia V. Herzog
University of California President's Postdoctoral Fellow
Email: aherzog@socrates.berkeley.edu

Timothy E. Lipman

Dr. Timothy E. Lipman
Postdoctoral Fellow, RAEL
Email: telipman@socrates.berkeley.edu

Cc:
Spencer Abraham, Secretary of Energy
Governor Gray Davis, Governor of California
Rosina Bierbaum, Acting Director, Office of Science and Technology Policy
Senator Frank H. Murkowski, Chairman, Senate Committee on Energy and Natural Resources
Senator Jeff Bingaman, Ranking Member, Senate Committee on Energy and Natural Resources
Hon. W.J. "Billy" Tauzin, Chairman House, Committee on Energy and Commerce
Hon. John D. Dingell, Ranking Member House, Committee on Energy and Commerce

Appendix: Supporting Materials and References

Many of the publications listed below are available on line at the Renewable and Appropriate Energy Laboratory's (RAEL) Internet site. The *Publications Page* is: http://socrates.berkeley.edu/~rael/papers.html

Note 1: Federal R&D funding for renewable energy and energy efficiency technologies

Federal funding and leadership for renewable energy and energy efficiency projects has resulted in a small number of notable successes, such as the *Energy Star* and *Green Lights Programs* that has now been emulated in a number of countries. Despite these achievements, funding in this area has been both scant, and so uneven that private sector involvement has been actually discouraged. A combination of a federal program for steadily increasing funding and active political leadership would transform the clean energy sector from a good idea to a pillar of the new economy. In particular, promising technologies such as fuel cells deserve special attention. Fuel cell development is attracting significant public and private funding and offers the promise of being a keystone technology for the ultimate transition from natural gas, petroleum, and coal energy to a renewable and hydrogen based energy economy.

Duke, R. D., and Kammen, D. M. (1999), "The economics of energy market transformation initiatives", *The Energy Journal*, **20**, pages 15 – 64.

Kammen, D. M. and Margolis, R. M. (1999) "Evidence of Under-Investment in Energy R&D Policy in the United States and the Impact of Federal Policy," *Energy Policy*, 27 pages 575 - 584.

Margolis, R. M. and Kammen, D. M. (1999) "Underinvestment: The Energy Technology and R&D Policy Challenge," *Science*, 285, pages 690 - 693.

President's Committee of Advisors on Science and Technology (PCAST) (1997) *Federal Energy Research and Development for the Challenges of the Twenty-First Century* (Washington, D.C.: Energy Research and Development Panel, President's Committee of Advisors on Science and Technology), November.

A second, and related issue is the structure of the Department of Energy itself. We have hindered, even crippled, the ability of the Department of Energy to investigate, promote and champion innovation in the energy sector by focusing much of its activities on the clean-up of the legacy of nuclear energy research and waste. While this is an important mission, it dominates the resources of the Department of Energy and prevents the focus from moving to current and future energy needs and opportunities. A separation of these functions is in order.

Note 2: Efficiency standards for residential and commercial water heating and space heating and cooling, and motors and appliances.

A confluence of technical advances and economic and policy mechanisms now exists that could be utilized to dramatically reduce domestic, commercial and industrial energy needs. Federal leadership and partnership programs with state and regional organizations could produce dramatic improvements and cost reductions.

Interlaboratory Working Group (2000) *Scenarios for a Clean Energy Future* (Oak Ridge, TN; Oak Ridge National Laboratory and Berkeley, CA; Lawrence Berkeley National Laboratory), ORNL/CON-476 and LBNL-44029, November.

Note 3: A federal Renewable Portfolio Standard

All federal RPS proposals should use tradable renewable energy credits for compliance. Renewable credit trading is analogous to the sulfur allowance trading system established in the Clean Air Act. Like emissions trading, it is designed to be administratively simple and to increase flexibility and decrease the cost of compliance with the standard. Electricity suppliers can generate renewable electricity themselves, purchase renewable electricity and credits from generators, or buy credits in a secondary trading market.

The RPS is the surest mechanism for securing the public benefits of renewables and for reducing their cost to enable them to become more competitive. It is a market mechanism, setting a uniform standard and allowing companies to determine the best way to meet it. The RPS will reduce renewable energy costs by:

- Providing a revenue stream that will enable manufacturers and developers to obtain reasonable cost financing and make investments in expanding capacity to meet an expanding renewable energy market.
- Allowing economies of scale in manufacturing, installation, operation and maintenance of renewable energy facilities.
- Promoting vigorous competition among renewable energy developers and technologies to meet the standard at the lowest cost.
- Inducing development of renewables in the regions of the country where they are the most cost-effective, while avoiding expensive long-distance transmission, by allowing national renewable energy credit trading.
- Reducing transaction costs, by enabling suppliers to buy credits and avoid having to negotiate many small contracts with individual renewable energy projects.

Clemmer, S.L., Nogee, A., and Brower, M. (1999) "A Powerful Opportunity: Making Renewable Electricity the Standard," Union of Concerned Scientists, January.

Note 4: Federal standards for net metering

Net metering eliminates the administrative expense of installing, reading, and billing for an additional meter to measure generation separately from consumption. During surplus generation

periods, the single meter spins backwards, so that the customer is billed only for the net amount of electricity consumed during a billing period. By facilitating small-scale generation by customers, net metering will help reduce loads on central generation, transmission and distribution, enhancing reliability as well as fuel diversity.

Wan, Y. (1996) *Net Metering Programs*, NREL/SP-460-21651, National Renewable Energy Laboratory, December.

Note 5: Improved federal standards for vehicle fuel economy

After five years of Congressional bans, studies on the potential for increases in CAFE standards to cost-effectively reduce petroleum demand are now underway by the Department of Transportation and the National Academy of Sciences. These studies, with results due in July 2001, will help to suggest optimal levels of increased standards, given the costs and benefits of higher fuel economy, as well as phase-in schedules that will protect the competitive interests of domestic automakers. The issue of raising CAFE standards is becoming increasingly relevant with progress in the PNGV program, and as several automakers are preparing to introduce high-efficiency fuel cell vehicles beginning as soon as 2003-2004.

Duleep, K. G. (1997) "Evolutionary and Revolutionary Technologies for Improving Fuel Economy," *Transportation, Energy, and Environment: How Far Can Technology Take Us?*, Edited by J. DeCicco and M. Delucchi, ACEEE, Washington, D.C.

Mark, J. (1999) "Greener SUVs: A Blueprint for Cleaner, More Efficient Light Trucks," Union of Concerned Scientists, July.

Office of Technology Assessment (1995) *Advanced Vehicle Technology: Visions of a Super-Efficient Family Car*, OTA-ETI-638, Office of Technology Assessment, U.S. Congress, Washington, D.C., September.

Note 6: Climate change and the need for federal leadership

The U.S. can reduce greenhouse gas (GHG) emissions while improving our economic efficiency, creating jobs and saving consumers money, maintaining our technological leadership, and achieving other environmental benefits. The options presented in this letter not only represent a responsible energy strategy, but can also simultaneously address the need to reduce U.S. GHG emissions. In particular, they would support a range of strategies to reduce power plant emissions, which account for a substantial percentage of total U.S. emissions of greenhouse gases, 29 percent in 1998. These include switching from our current reliance on high-carbon fossil fuels, particularly coal and oil, to renewable fuel sources, which have zero carbon emissions, and lower-carbon natural gas; and increasing the efficiency of electricity generation and use.

We strongly support the recent initiatives in Congress, for which the current Administration has indicated it's backing, to reduce pollutant emissions from electricity generation. In the 106th Congress Senator Jeffords and Senator Lieberman introduced, S.1369, the Clean Energy Act of

1999. This legislation contained provisions that addressed the environmental damage and competitive distortions created by the patchwork of unequal and inadequate standards that currently apply to electric power plants nationwide. The bill put a national cap on emissions from all power plants of nitrogen oxides, sulfur oxides, mercury, and carbon dioxide. The reductions in carbon dioxide would have brought emissions levels back to 1990 levels by 2005, the same level implied by the non-binding targets of the Rio Treaty of 1992, as ratified by the U.S. Senate. Legislation that controls the four major power plant pollutants in an integrated package will help reduce uncertainties for electric generators and will be less costly than separate programs for each pollutant. Integrated control encourages system-wide efficiency improvements and increased utilization of cleaner fuels. And while voluntary action by American companies is an attractive option to consider, in the last ten years voluntary actions have failed to reduce carbon dioxide emissions in the U.S. Instead, emissions have increased by 15 percent since 1990 and continue to increase.

Baer, P., Harte, J., Haya, B., Herzog, A.V., Holdren, J., Hultman, N.E., Kammen, D.M., Norgaard, R.B., and Raymond, L. (2000) "Equity and Greenhouse Gas Responsibility," *Science*, 289, page 2287.

Interlaboratory Working Group (2000) *Scenarios for a Clean Energy Future*, (Oak Ridge, TN; Oak Ridge National Laboratory and Berkeley, CA; Lawrence Berkeley National Laboratory), ORNL/CON-476 and LBNL-44029, November.

IPCC (Intergovernmental Panel on Climate Change) (2001) *Climate Change 2001: The Scientific Basis*, January.

Kinzig, A. P. and Kammen, D. M. (1998) "National trajectories of carbon emissions: Analysis of proposals to foster the transition to low-carbon economies", *Global Environmental Change*, 8 (3), pages 183 - 208.

Natural Resources Defense Council (2001) *A Responsible Energy Policy for the 21st Century*, February.

Department of Energy
Washington, DC 20585

February 20, 2001

2001-004519

Mr. Joe F. Colvin
President and Chief Executive Officer
Nuclear Energy Institute
1776 I Street, N.W. (Suite 400)
Washington, D.C. 2006-3708

Dear Mr. Colvin:

We have received your correspondence dated February 15, 2001, requesting a meeting with Secretary Spencer Abraham to discuss nuclear energy's important role in national energy policy.

We have forwarded your request to the Secretary's Office of Scheduling and Advance. A staff member from that office will notify you regarding the status of your request.

If you have any questions, please call Ms. Robyne Johnston at (202) 586-5534.

Sincerely,

James N. Solit
Director, Executive Secretariat

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27741

MILLER ENERGY, INC.

FACSIMILE TRANSMITTAL SHEET

TO: Robin Johnston	FROM: Brandi Miller
COMPANY: Secretary of Energy Spence Abraham	DATE: 02/20/2001
FAX NUMBER: 202-586-7573	TOTAL NO. OF PAGES INCLUDING COVER: 1
PHONE NUMBER: 202-586-5534	616-324-3390 (phone)
RE: Scheduling Meeting Times	616-324-3584 (fax)

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT X PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Robin,

I would like to schedule a meeting with the Secretary of Energy, Spence Abraham together with C. John Miller from Miller Energy, Inc. and Bill Myler Sr. from Muskegon Development Company. The purpose of this meeting is to discuss the Energy Policy. They will be in Washington D.C. on March 14 and would like to meet between the times of 10:00 am and 4:00pm. Please call and advise if you can arrange a meeting during these times.

Thanks

2001-004678 Feb 20 A 9:54

2001-005786 Mar 2 P3:53

REPLY TO:

☐ 135 HART SENATE OFFICE BUILDING
WASHINGTON, DC 20510-1501
(202) 224-3744
TTY: (202) 224-4479
e-mail:chuck_grassley@grassley.senate.gov

☐ 721 FEDERAL BUILDING
210 WALNUT STREET
DES MOINES, IA 50309-2140
(515) 284-4890

☐ 206 FEDERAL BUILDING
101 1ST STREET SE.
CEDAR RAPIDS, IA 52401-1227
(319) 363-6832

REPLY TO:

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320 6TH STREET
SIOUX CITY, IA 51101-1244
(712) 233-1860

☐ 210 WATERLOO BUILDING
531 COMMERCIAL STREET
WATERLOO, IA 50701-5497
(319) 232-6657

☐ 116 FEDERAL BUILDING
131 E. 4TH STREET
DAVENPORT, IA 52801-1513
(319) 322-4331

☐ 307 FEDERAL BUILDING
8 SOUTH 6TH STREET
COUNCIL BLUFFS, IA 51501-4204
(712) 322-7103

United States Senate

CHARLES E. GRASSLEY

WASHINGTON, DC 20510-1501

February 20, 2001

The Honorable George W. Bush
President of the United States
The White House
Washington, D.C. 20500

Dear President Bush:

Many families in my home state of Iowa right now are forced to decide between heating their homes or buying food and medicine. No one should be forced to make this decision. In addition, many farmers and small businesses are on the brink of losing their livelihood because they are facing energy costs three times greater than just a year ago.

Our nation's energy policy over the past eight years has directly led to the dire situation my constituents are facing today. Government policies have constrained coal-fired and nuclear generating power plants, and discouraged new domestic oil and gas exploration and production. At the same time, our dependence on foreign oil has grown to more than 55 percent.

Natural gas has now become the fuel of choice for both consumers and electricity generation in America. In fact, more than 70 percent of new homes are equipped with natural gas, and gas fired power production is estimated to grow by 42 percent by 2005, with more than 90 percent of the new electricity-generation capacity being fueled by natural gas. Overall, demand increased in 2000 by 4.3 percent from 1999, and is estimated to grow by 30 percent or more over the next decade.

Natural gas has proven to be an efficient, reliable, environmentally clean energy source. Because of the growing demand, it is vital that we increase domestic production of natural gas. Although existing natural gas resources are adequate for the near term, access to vast resources on federal lands is vital to meet future demand. Current estimates show that there are approximately 200 trillion cubic feet of natural gas reserves that are subject to federal access restrictions. 200 trillion cubic feet represents 10 years of supply at today's consumption level.

The United States must also take action to decrease our dependence on foreign sources of oil. Currently, we depend on foreign oil cartels for 58 percent of our crude oil, and our dependence is estimated to reach 65 percent by 2020. We must support and encourage responsible resource development, while using our best technology to protect our environment, to increase domestic energy production.

In an effort to promote U.S. energy independence, we must also diversify our domestic energy production, including advancing renewable sources like wind, biomass, soy diesel and ethanol. Alternative sources of energy can provide a viable solution to America's dependence on finite fossil fuels. As you may know, in 1992, I authored legislation to provide the first ever tax incentive for wind energy production. In 1997, I pushed a ten-year extension of the tax credit for corn-based ethanol through Congress. Last year, domestically produced and environmentally clean ethanol displaced more than 68 million barrels of oil. For this reason, it is vital that you oppose any Clean Air Act oxygenate waiver.

In conclusion, I am encouraged by your recent decision to name a Cabinet-level task force to develop a comprehensive energy plan. Given the serious nature of this crisis, I urge you to develop this plan as expeditiously as possible so we can take action to alleviate the financial burden of high energy costs for all Americans. I look forward to working with you to establish a sustainable energy policy that will protect consumers from severe price fluctuations and will reduce our dependence on foreign sources of oil.

Thank you for your consideration.

Sincerely,

Charles E. Grassley
United States Senate

cc: Vice President Dick Cheney
Secretary of Energy Spencer Abraham

2001-005347

Parish of Ascension

Office of the Parish Council
www.ascensionparish.net

THOMAS A. PEARCE
Chairman

ALVIN W. THOMAS, JR.
Vice-Chairman

SITMAN "RED" LOUPE
Secretary

ALVIN W. THOMAS, JR.
Councilman, District 1

THOMAS A. PEARCE
Councilman, District 2

ADRIAN THOMPSON
Councilman, District 3

DUDLEY BROWN
Councilman, District 4

DONNELL "NICK" NICKENS
Councilman, District 5

MILTON "NEEDLENOSE" VICKNAIR
Councilman, District 6

ALLISON J. BOURQUE
Councilman, District 7

SHAFTER KLING
Councilman, District 8

JERRY P. SAVOY
Councilman, District 9

MARTIN MCCONNELL
Councilman, District 10

J. DARNELL MARTINEZ
Councilman, District 11

February 20, 2001

President George W. Bush
The White House
1600 Pennsylvania Ave.
Washington, DC 20500

2001-005347 2/26/01 4:29

Dear President Bush:

The Ascension Parish Council met in regular session on Thursday, February 15, 2001, 7PM in the Parish Council Meeting Room, Courthouse East, Gonzales, Louisiana and the attached Resolution, upon motion duly made by Councilman Shafter Kling and seconded by Councilman Martin McConnell, was unanimously adopted.

Thank You.

Very Truly Yours,

Sitman Loupe, Jr.
Ascension Parish Council Secretary
Ascension Parish Government

enc: Resolution

cc: Secretary of US Senate
Clerk of US House of Representatives
Secretary - Department of Energy
Secretary - Department of Interior
Louisiana Congressional Delegation

P.O. BOX 1659, 208 EAST RAILROAD AVENUE, GONZALES, LOUISIANA 70707
TELEPHONE 225-621-5709 • TELEFAX 225-644-6479
www.ascensionparish.net

27745

Parish of Ascension

State of Louisiana

RESOLUTION

WHEREAS, CF INDUSTRIES, PCS NITROGEN FERTILIZER, L.P. and TRIAD NITROGEN, L.L.C., located in Ascension Parish are producers of ammonia;

WHEREAS the Louisiana ammonia industry accounts for 40 percent of the domestic production of ammonia;

WHEREAS natural gas makes up 90 percent of the costs of producing ammonia;

WHEREAS in the last year alone the price of natural gas has more than tripled and the cost of producing ammonia has risen substantially;

WHEREAS high natural gas prices have led CF INDUSTRIES, PCS NITROGEN FERTILIZER, L.P., TRIAD NITROGEN, L.L.C. and the members of the Louisiana Ammonia Producers to temporarily shut down all or part of their ammonia production units;

WHEREAS two Louisiana companies, one being BORDEN CHEMICAL & PLASTICS in Ascension Parish, have gotten out of the ammonia business completely, while others have had to resort to layoffs;

WHEREAS the majority of the ammonia produced in Louisiana is used to make fertilizer;

WHEREAS there are numerous untapped natural gas reserves in the United States;

THEREFORE BE IT RESOLVED that the Ascension Parish Council does hereby request the Congress of the United States to use the powers at its disposal to commission the United States Department of Energy to establish a national energy policy. That such policy should pursue a long-term remedy to these problems by providing incentives for immediate domestic natural gas exploration and production, including opening untapped natural gas reserves.

27746

Representatives, the Secretaries of the Department of Energy and the Department of the Interior and to each member of the Louisiana Congressional Delegation.

This resolution was declared duly adopted by the Ascension Parish council on the 15 day of February, 2001 at a regular meeting of the Council, a quorum of the members being present.

PARISH COUNCIL SECRETARY

COUNCIL CHAIRMAN

Department of Energy
Washington, DC 20585

February 21, 2001

Mr. Van Sahakian
5550 N. Braeswood Boulevard
Suite 129
Houston, TX 77096

Dear Mr. Sahakian:

Thank you for your recent letter, which offered recommendations concerning the development of synfuels production.

As you may know, one of President Bush's first acts was creating a National Energy Policy Development Group, headed by Vice President Cheney, to help the private sector and government at all levels, promote dependable, affordable, and environmentally sound production and distribution of energy for the future. This group includes the Secretary of Energy, as well as the Secretaries of the Treasury, Interior, Agriculture and Commerce Departments, the heads of the Federal Emergency Management Agency, the Environmental Protection Agency, the President's Deputy Chief of Staff for Policy, and the Assistants to the President for Economic Policy and Intergovernmental Affairs.

The group will consider the ideas and recommendations of consumers, businesses, and independent experts on how best to address the broad range of energy issues now facing the Nation, including rapidly rising costs for natural gas, electricity supply and price problems in the West and the increasing dependence of the United States on imported oil. Your specific suggestions will be made known to participants in this process.

Thank you for writing.

Sincerely,

Margot Anderson

Margot Anderson
Acting Director
Office of Policy

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2001-001511

Department of Energy
Washington, DC 20585

FEB 22 2001

Mr. Malcolm E. O'Hagan
President
National Electrical Manufacturers Association
1300 North 17th Street, Suite 1847
Rosslyn, VA 22209

Dear Mr. O'Hagan:

Thank you for your January 22, 2001, letter to Secretary of Energy Abraham, congratulating him on his appointment. My office has been asked to respond.

We value the National Electrical Manufacturers Association's (NEMA) long history of cooperation with the Department of Energy to develop the necessary regulations and voluntary programs that promote energy efficient electrical products and in particular, lighting products, distribution transformers, and electric motors. Your pledge of continued support by NEMA as an information resource to the Department in the development of a national energy policy is appreciated.

Secretary Abraham is deeply committed to developing a strong national energy policy. Recent developments in electricity markets provide evidence to support a national energy policy that includes energy efficient electrical products, such as those produced by the NEMA member companies.

We believe it is vital that government and private interests work together in earnest to tackle these difficult and challenging jobs that face us. We look forward to working with you toward our national energy policy objectives.

Sincerely,

Abraham E. Haspel
Acting Director
Office of Energy Efficiency
and Renewable Energy

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27749-

ANARI, Inc.

The Carriage House
1 Saint Matthew's Court, N.W.
Washington, D.C. 20036

Global Institutional Investment
Institutional Research
Capital Placement

Tel: (202) 331-7738
Fax: (202) 331-4963
anariwdc@aol.com

DATE: February 22, 2001
TO: Spencer Abraham
ENTITY: Secretary of Energy
PHONE: (202) 586-5534 FAX: (202) 586-7573
FROM: William A. Anawaty, President
RE: Washington Worldview meeting request
PAGES: 2

Dear Secretary Abraham:

Congratulations on being appointed and confirmed as Secretary of Energy. It must be challenging and gratifying to take on that responsibility in this new Bush Administration at this time when energy is again a pivotal policy question.

I am writing to request a meeting with you on behalf of a group of institutional investors from several US cities and foreign countries. At least annually, I host these investor groups in Washington for a 2-day program called Worldview Washington, to examine Government policies affecting economic performance, through the eyes of policy officials and influential players.

In September 1999, Larry Lindsey met over lunch at the Federal City Club with my group of 12 institutions.

Also in September 1999, Dan Yergin, President of Cambridge Energey Associates (a college classmate of mine) met with my group for lunch at the Tabard Inn in Washington.

In September 2000, Condoleezza Rice met for breakfast at the Cosmos Club with my group of 18 institutional investment leaders, among a variety of other meetings.

This time around, on May 3-4, the next iteration of Worldview Washington will explore the "First Hundred Days" of the Bush Administration. While learning your views and directions on energy policy issues both domestically and globally, I would hope the collegial dialogue with these global investment leaders could also be useful for you in your thinking and planning.

We expect about 15 major institutions to attend, principally from the US, but also from the UK, Germany, France, and Japan. Likely participants so far include CIO's, CEO's,

chief strategists, and chief economists of TIAA-CREF, Wellington, Delaware Advisors, DuPont Pension Fund, Ford Foundation, MacArthur Foundation, Deutschebank, Abbey National, and Nippon Life, among others.

May I request that you meet with us – either for 30-45 minutes at the Energy Department, or more ideally for breakfast, lunch, or dinner on May 3 or 4? If you signal a general inclination to accept this, I'd be happy to work out details with your scheduling office, which we understand to be available via phone 586-5534 and fax 586-7573.

Sincerely yours,

William Anawaty

William Anawaty
President

P.S. – On a personal note, our paths have crossed previously in connection with the Kahlil Gibran Memorial Garden on Embassy Row – which you were kind enough to support strongly as a Senator. I am one of the co-founders and directors of the Foundation that originated the Memorial, and worked closely with Bill Baroody, Sheryl Ameen, Bob Andrews, and others toward that goal. Your timely and influential help from the Senate, along with that of Nick Rahall, Mary Rose Oakar, and others in the House, was always much appreciated.

2001-004959 Feb 22 A10:06

Exec Sec
please log in

(This was part of an email to Joe Kelliher)

##########

Joe;

I am seeking your assistance is setting up a meeting between Secretary Abraham and the President and CEO of Mirant, Marce Fuller. The purpose of the meeting is to introduce our new company and to review at a high level our view on competitive energy markets with a particular emphasis on the activities in California. In addition, we would like to share our thoughts on the development of the Administration's energy policy.

Marce Fuller's executive assistant is Linda Fuller and can be reached at 678-579-7602 to schedule the meeting. If you need additional information from me, I can be reached at 770-329-8206. A copy of Marce's bio is also attached.

Thanks for your help.

MIRANT

Marce Fuller

President and Chief Executive Officer
Mirant Corporation

Current position Marce Fuller became president and chief executive officer of Mirant Corporation in 1999. Formerly known as Southern Energy Inc., Mirant is a global competitive energy company with leading energy marketing and risk-management expertise. It has extensive operations in the Americas, Europe, and Asia-Pacific.

Earlier Mirant positions 1997 - 1999: Fuller was named president and chief executive officer of Mirant Americas Energy Marketing when it was created in 1997. This industry leader provides energy marketing, financial services, risk management, and physical delivery of energy commodities to large wholesale customers in North America. In 2000 it sold more than 186 million-megawatt hours of power and more than 6.9 billion cubic feet of natural gas per day.

1994 - 1997: Fuller served as senior vice president of the North America division of Mirant. In that capacity, she had responsibility for all aspects of asset development and management for Mirant's North America assets, including acquisition and financing strategy, construction, operations, environmental compliance, and financial performance.

1992 - 1994: As an international project director with the company, Fuller was responsible for business development activities in Latin America, the Caribbean, Australia, and New Zealand. Fuller led negotiations for the purchase of Hydroelectrica Alicurá in Argentina and EDELNOR in Chile. She also led the bid development and early negotiations that resulted in investment in the power generation facilities of Trinidad and Tobago.

Career before Mirant 1990 to 1992: Before joining Mirant, Fuller served as assistant to the chief executive officer of Southern Company Services, a Southern Company subsidiary. In that assignment, Fuller managed numerous special projects, including development of Southern Company's strategy to enter the international power market through its Southern Energy subsidiary, which eventually became Mirant Corp.

1988 - 1990: Fuller was a senior analyst in Southern Company Services' corporate finance area, where she conducted financial evaluations of independent power projects as potential investments.

1985 – 1988: Fuller joined Southern Company as a staff engineer in electric system planning at Alabama Power, one of the company's regulated operating companies. In that position, she supported Alabama Power's negotiations for long-term wholesale power sales to unaffiliated utilities

1983 – 1985: Fuller worked as an applications engineer for General Electric.

Boards and associations Fuller is a member of the board of directors for Curtiss-Wright. She is also an officer of Southern Company, a position she will resign when Mirant spins off from Southern Company in April 2001.

Education: BS, Electrical Engineering; University of Alabama (1983)
MS, Power System Engineering; Union College (1984)

For more information, visit Mirant's web site at mirant.com.

Mirant – "See the Opportunity"

01/01

27753

2001-006041 Mar 6 A 10:29

ipaa
America's Oil & Gas Producers

February 23, 2001

The Honorable Spencer Abraham
Secretary of Energy
United States Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Secretary Abraham:

We are writing to request a meeting with you on behalf of the members of the Independent Petroleum Association of America (IPAA). IPAA represents thousands of independent oil and natural gas explorationists and producers in the United States. While we know that you have worked with members of IPAA over the past years, we think it would be helpful for our leadership to meet briefly with you in your new capacity as Secretary of the Department of Energy. The purpose of the meeting would be to describe the issues within your department that we believe are most compelling and to offer our support to you and your Department on all issues.

Obviously, we can make ourselves available at your convenience. Our Officers and Board of Governors will be meeting in Washington, D.C. on the afternoon of Tuesday, March 13. Consequently, it would be beneficial if we could schedule a meeting either on the morning of Tuesday, March 13, or on Wednesday March 14.

We look forward to meeting with you. If you have any questions regarding this request, please contact either of us or Cori Cuttler at 202-857-4722.

Sincerely,

Jerry Jordan
Chairman

Barry Russell
President

Independent Petroleum Association of America • 1101 Sixteenth Street, N.W. • Washington, D.C. 20036
202-857-4722 • Fax 202-857-4799 • www.ipaa.org

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DAVID V. MARVENTANO, STAFF DIRECTOR

U.S. House of Representatives
Committee on Energy and Commerce
Room 2125, Rayburn House Office Building
Washington, DC 20515–6115
February 22, 2001

2001-005314 Feb 26 p 4:26

Ms. Elizabeth Campbell
Director, Natural Gas Division
Energy Information Administration
1000 Independence Avenue, SW
Washington, DC 20585

Dear Ms. Campbell:

I am writing to confirm the invitation for you to testify before the Subcommittee on Energy and Air Quality on Wednesday, February 28, 2001, at 1:00 p.m. in 2123 Rayburn House Office Building. The hearing will be entitled "National Energy Policy" and will focus on natural gas issues.

This is one in a series of hearings on national energy policy. Your testimony should address the current status of the natural gas markets, including the causes of the recent price increases; the role of natural gas in a comprehensive national energy policy that addresses all forms of energy; and how to increase the supply and deliverability of natural gas and ensure that adequate supplies reach consumers in a timely and safe fashion.

Following are important details concerning the preparation and presentation of your testimony.

The Form of Your Testimony. You are requested to submit a written statement which may be of any reasonable length and may contain supplemental materials; however, please be aware that the Committee cannot guarantee that supplemental material will be included in the printed hearing record. Your written statement should be typed, double spaced, and should include a one-page summary of the major points you wish to make. You will have an opportunity to present an oral summary of your testimony to the Subcommittee; to ensure sufficient time for Members to ask questions, your oral presentation should be limited to five minutes.

Pursuant to Rule 4(b)(1) of the Rules of the Energy and Commerce Committee (a copy of which is enclosed), I am requesting you provide 75 copies of your written statement at least <u>two</u> working days in advance of your appearance. This will allow Members and staff the opportunity to review your testimony. On the day of the hearing, please bring an additional 75 copies of your testimony to satisfy the anticipated public interest in this hearing.

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Rule 4(b)(1) of the Committee Rules also requires that, if you have the technological capability, you should also submit a copy of your testimony in electronic format, i.e., on a computer disk. The Committee will post your testimony to the Committee Website (at "http://www.house.gov/commerce/welcome.html") after the hearing. This will increase public access to your testimony and reduce the Committee's printing costs. Please be aware that submission of your testimony in electronic form does not relieve you of the obligation to submit the requested number of printed copies of your testimony. Additional guidelines for submission of testimony in electronic format are enclosed.

Please send the electronic and printed copies of your testimony required two working days before the hearing to the attention of the Legislative Clerk for the Committee on Energy and Commerce in 2125 Rayburn House Office Building, Washington, D.C. 20515.

The Truth-in-Testimony Requirement. Clause 2(g)(4) of Rule XI of the Rules of the House, and Rule 4(b)(2) of the Committee Rules, require that witnesses appearing in a nongovernmental capacity disclose the amount and source of: (1) any federal grant, or subgrant thereof, by agency and program; and (2) any federal contract, or subcontract thereof, received by the witness, or by an entity represented by the witness, during the current fiscal year or either of the two preceding fiscal years. Enclosed is a two-sided page which is intended to assist you in complying with this requirement. This completed form, and a copy of your curriculum vitae or resume, should be included with each copy of your testimony.

Publication of the Hearing Record. Rule XI, clause 2(e)(1)(A) of the Rules of the House requires the Committee to keep a written record of committee hearings which is a substantially verbatim account of remarks made during the proceedings, subject only to technical, grammatical, and typographical corrections. Your testimony, the transcript of the hearing, and any other material that the Subcommittee agrees to include in the hearing record (subject to space limitations) will be printed as a record of the hearing. You will receive a copy of the printed hearing record when it becomes available, usually 30 to 60 days after the date of the hearing.

If you have any questions concerning any aspect of your testimony, please contact Andy Black of the Energy and Commerce Committee staff at (202) 225-2927.

Sincerely,

Joe Barton
Chairman
Subcommittee on Energy and Air Quality

Enclosures: (1) Electronic Format Guidelines
(2) Rules for the Committee on Energy and Commerce
(3) Truth-in-Testimony disclosure form

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February 21, 2001

The Honorable Spencer Abraham
Secretary of Energy
Rm.7A257
1000 Independence Ave.
Washington, DC, 20585

Re: National Effect of Electric Power Restructuring

Dear Mr. Abrams:

As a loyal and strong supporter of the Republican Party and our new President, George W. Bush, I have become increasingly concerned with our US national electric power policy. The lack in our Federal Government, particular in the Department of Energy and the Federal Energy Regulatory Commission, of competent people to assess the impact of potential new policy on all new Americans is startling.

I have attached a copy of an article which will be appearing in the March 1, 2001, issue of Public Utilities *Fortnightly*, a widely circulated national magazine. I thought you would like to see it in advance. It indicates that solely because of government policy, largely originating in the Federal Government, our national electricity costs are increasing more than 10%. These are the total costs to all consumers in the USA. The distribution among various classes of customers, industrial, residential, and commercial, depends on state and business practices. The fact remains, however, that our polices are leading to a significant and unjustified transfer of money from those using electric power to those providing electric services. This is being done without any consideration of the impact on our national economy, and the impact on the reliability of service and consequence to human suffering that results from power interruptions.

I have included a brief summary of my qualifications to support my views. My hope is that you or a key member of your staff will see this article and recognize the need to evaluate the costs and benefits of past policy and, as I say in the article, save what is good, throw out what is bad, and restructure the rest.

A hopeful Republic supporter.

Sincerely,

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ERRANT ECONOMICS? LOUSY LAW? MARKET MANIPULATION? ALL THREE !!

By J.A. Casazza
President, American Education Institute
IEEE Life Fellow

Public Knowledge:

Transparency. Economists stress the need for it so those who vote with their dollars can make intelligent decisions. Why has data been concealed on the cost increases needed to achieve electric power restructuring (erroneously called deregulation) that has taken place and is continuing to take place? Has the withholding of such information been an instrument for manipulation of public opinion? Clearly, yes.

The purpose of this article is to assist the process of providing national transparency. Information must be collected to enable an overall evaluation of the costs and benefits of present policies, and, hopefully, development of improved future policies out of the disasters of the past ten years.

Booming prices, more power interruptions. It is a national problem. What has caused it? FERC blames higher costs because of generation shortages and rising fuel prices. The California PUC blames market abuses from the lack of true competition. The economists complain a true competitive market has not been established. These related views do not address the core of the problem. The entire restructuring process failed to investigate the costs and benefits resulting from the policies being adopted. Unlike our environmental procedures, an impact statement was not required from those proposing major changes in how electricity was to be produced, distributed, bought, sold,

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and priced. The huge number of those that would benefit from the restructuring were not interested in any analysis of the costs and benefits. Those in government saw political capital in claiming electricity price reductions; those in the electric power industry saw a potential for large profits; those in the professions saw a chance for increased business and to earn large consulting fees. They sold restructuring to an unwary public on the mantra that competition is good -- it will reduce prices. Only a few in the engineering profession stood their ground and argued that the effects of what was being done had not been analyzed.[1] They were accused of "creating a smoke screen to prevent progress." What have the results shown?

Errant Economics

Time. What is its role in economics? Do the economics of a business change when the time between production and use of a product is months, or weeks, or days, or with the speed of light? The electric power business is unique. It has the shortest time constant between production and use, i.e., zero, and the longest time constants for increasing production and delivery capacity, i.e., years. Most businesses provide a product such as gas, water, steel, ice cream, and shoes. The characteristics and quality of the products they provide can be different. Products can be made or obtained in advance of need and stored by the producer or users for future needs if price change are anticipated.

Many other businesses provide services such as the telephone, express mail, and Internet access. In these service businesses, there is time available for provision of this service. The characteristics of the service can be different, e.g., FedEx vs. UPS vs. US

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Mail. Delays are acceptable if the facilities for the service are not available when requested.

Electricity is really a service, not a product. It is a means for taking energy in one form (e.g., fuel) from one location and delivering it instantly to other locations in a more useable, deliverable (wires) and controllable form. A kilowatt hour is the same everywhere, there can be no product differentiation. There are no inventories possible with electric power. Busy signals are not acceptable when a user flicks a switch to light a room. The operational time constant for electric power is zero. The planning time constant for the electric power industry is two to ten years. No other industry requires the amounts of time required by the electric power industry to increase production and delivery capability. A key factor in the economics of any business is the ratio of these two time constants.

The economic theory used in restructuring the electric power industry has been badly flawed. The economists from some of our most prestigious universities have failed to fully understand the electric power industry before applying their theories to it.

As stated by Dr. Eugene Coyle:[2]

> ... economic efficiency will not result and cannot result from an unregulated power industry. ... furthermore, ... such a market cannot provide rates that will be 'just, reasonable, and non-discriminatory' as is now required in the statutes or regulations of most states."
>
> The standard theory of competition fails in industries where the product sold is an undifferentiated commodity, and separately requires large fixed investment, or 'overhead costs'.

Electric power has these characteristics.

Human behavior has not been correctly considered in developing the economic theory for electric power. John Maynard Keynes[3] wrote:

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> The beauty and simplicity of such a theory are so great that it is easy to forget that it follows not from the actual facts, but from an incomplete hypothesis introduced for the sake of simplicity. Apart from other objections to be mentioned later, the conclusion that individuals acting independently for their own advantage will produce the greatest aggregate of wealth depends on a variety of unreal assumptions to the effect that the processes of production and consumption are in no way organic, that there exists a sufficient foreknowledge of conditions and requirements, and that there are adequate opportunities of obtaining this foreknowledge. For economists generally reserve for a later stage of their arguments the complications which arise - (1) when efficient units of production are large relative to the units of consumption, (2) when overhead costs or joint costs are present, (3) when internal economies tend to the aggregation of production, (4) when the time required for adjustments is long, (5) when ignorance prevails over knowledge, and (6) when monopolies and combinations interfere with equality in bargaining - they reserve, that is to say, for a later stage their analysis of the actual facts. Moreover, many of those who recognize that the simplified hypothesis does not accurately correspond to fact conclude nevertheless that it does represent what is 'natural' and therefore ideal. They regard the simplified hypothesis as health, and the further complications as disease.

He has described remarkably well, many years ago, the characteristics of the electric power industry.

Dr. Coyle also cites Game Theory developed by Lester G. Tesler[4], an economist at the University of Chicago. Tesler concludes that the players in the game - producers of electricity for example - should "cooperate" to reach economic efficiency, i.e., the best solution for society.

Clearly much of the economic theory that has applied in the restructuring of our electric power systems has been wrong -- it has failed to recognize the unique characteristics of our electric power systems. For this, some of our leading universities are largely at fault. They appear more concerned with the research grants they could obtain, and the consulting fees they would subsequently earn, than the public welfare.

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Inherent Costs of Restructuring

To provide a definitive and precise summary of the inherent costs and benefits of the restructuring of the electric power industry is a massive assignment. It needs a collection of data for all costs that changed because of restructuring. This obviously requires a projection of what they would otherwise have been, data that can be projected only approximately, even with knowledge of the procedures in place before major restructuring was initiated. Based on such knowledge, a list of specific costs and benefits increases resulting from restructuring could be estimated. Also needed is a vast amount of actual cost data from every state and region of the USA, and from those providing electric power, much of which would not be made available under claims of its "competitive value".

How to proceed? Start through the forest by accumulating what can be obtained from available sources. Where only a small amount of data for a state or a company can be obtained, obtain as many samples as possible, and average them. Costs also have to be classified to determine which are initial one-time only costs and which are costs that will continue for many years. Using judgment, these data can be pro-rated to obtain an indication of national costs and benefits for each category. Review of the itemized data can provide an estimate of overall national totals. While such fragmentary data doesn't provide precise numbers, as in intelligence or detective work, it does provide an indication of the answer. It will get you in the ballpark, but not to home plate.

For more than four years, I have been collecting and reviewing information from many sources for this purpose, including NERC, EIA, FERC, DOE, EPRI, IEEE magazines, newspapers, the Congressional Research Service, and the Internet. I have

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also obtained information from my personal contacts, from those attending my IEEE Distinguished Lectures, from my lectures for the American Education Institute, and from fellow engineers who have been involved in various restructuring consulting assignments. Based on this data, and my professional judgment, I have compiled my estimate of the costs and benefits of restructuring.

Table I provides the results of my analysis of cost increases. It shows that, without any market manipulation or change in fuel prices, the restructuring policies adopted in the USA have caused cost increases requiring an overall increase in the national annual cost of electricity of about $27.8 billion, or 13% of average national prices. A breakdown is given in Tables II, III, IV, and V, which show the increases in capital, operating, administrative, and reliability costs. These tables reflect the results of sales of close to 100,000 Mw of generating capacity at several times book value. Also a key factor were the disincentives to build new transmission lines.

Annual cost increases have been used in this analysis. Some costs will be incurred as a "lump sum". Others will be spread over many years. To obtain estimated annual costs, "lump sum" costs were typically assumed to be recovered over a 10-year period based on a 15% return. While effort was made to avoid "double counting," and while a small amount of these costs may remain to be recovered in the more distant future, they represent the order of magnitude of the extra electricity costs from restructuring.

Total costs to be borne by consumers have also been estimated, although only those that need to be recovered in the price of electricity have been used to determine the required 13% average national increases.

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A remaining question still requiring an answer is "would our generation shortages have been so severe, and our reliability problems been as great if we had continued to use our former procedures of inter-company cooperation and split savings on power interchanges?" Many believe the answer is no. A competent analysis should be made to determine the answer to this question.

Benefits of Restructuring

The benefits of restructuring can not be easily determined. However, with some reasonable assumptions and the available data, order of magnitude projections can be made. These are shown in Tables VI. It shows the estimated benefits accruing to consumers, not the huge profits accruing to the suppliers. An estimate of annual benefits to consumers of about $6.9 billion is reasonable. This amounts to an overall annual decrease in the cost of electricity of about 3%.

Market Manipulation

The "rules of the game" as established by legislation and regulation have provided opportunities for organizations to "game the market". This is what some believe competition is all about. In other industries manufacturers decide when to produce or how to provide their services, how to price them, etc., to maximize their immediate profits. This is the inherent flaw in much of the legislation that was adopted for electric power. The rules of the game induced a "profits now" approach, not an approach designed to minimize long-term costs. Adequate investigations have not been made of the incentives to withhold generating capacity or to adjust reliability rules to reduce

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competition, and the taking of other measures which would increase the scarcity of electric generation so as to drive prices and profits up.

A key ingredient for providing the ability to manipulate the market, has been the lack of knowledge and understanding of those in state governments of the operation and economics of electric power systems.[5] Market manipulation in California provides an unfortunate example. Fellow engineers with whom I have associated have told me that while working as consultants in the California restructuring, they knew that the system being established was one that would encourage the deliberate creation of shortages and withholding of generating capacity from operation and the delaying new capacity installations in order to maximize profits. These engineers were required to sign confidentiality agreements which prohibited them from discussing the problems they saw when working as consultants in the California restructuring.

Universities have been given funds to do research on generating procedures and bidding procedures for both transmission rights and available generation that would maximize the profits of the bidder with no regard to the impact on total costs for electricity. Consultants have been asked to find locations for new generation that would cause transmission constraints for competitors, enabling the new plant to sell at a higher price or to capture a market. Those who have investigated recent experience in California have commercial or marketing backgrounds. A lack of understanding of power system operation is apparent in their procedures. Procedures for much more thorough investigations are available.

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Based on my many years of experience, I believe "gaming the system" has increased national electricity costs somewhere between 1% and 5%. In my judgment, an estimate of 3% is reasonable.

Increasing Fuel Costs

Increasing fuel costs have been responsible for some of the large electricity cost increases that have occurred recently. Fuel costs historically have been about 40% of total electricity costs. A 50% increase in the cost of fuel (oil, gas, and coal) would increase overall electric costs about 15% since hydro and nuclear costs would not be affected.

Overall Cost Increases

A reasonable projection of the overall increase in national electricity costs by major components is shown below.

Increase from restructuring	13%
Decrease from restructuring	3%
Increase from market manipulation	3%
Increase from fuel costs	15%
TOTAL INCREASE:	28%

This is not far from the overall national cost increase that has occurred in electricity in the past year. It shows a net requirement to increase costs of about 10% solely as a result of restructuring. In addition, consumers will bear in other ways a cost increase of about 3% because extra reliability related costs as shown in Table V. The decline in reliability is also causing some consumers to spend money to buy small generation units for emergencies, an additional extra cost not included.

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There are some additional costs that have not been included which have not received adequate attention. One is the securitization of debt as a part of the restructuring. Some states have guaranteed for the utilities some of the debt incurred as a part of the restructuring process. This securitization process has reduced debt cost, about 4 percent, e.g., from 11% to 7%. There is no free lunch, however, since this benefit is being achieved at the expense of "trading on the debt ratings" of states which provide it. When such states require additional financing the interest rates they will pay will recognize their securitization obligations. The costs of "trading on the debt ratings" of the state is something that taxpayers will have to pay sooner or later.

Lastly, and perhaps most importantly, some contracts for sales of generating capacity are being accompanied by a requirement that the seller buy the output of the plant for a number of years. The California experience has demonstrated the importance of such contracts. The negotiations for these sales present great risks, however. Sellers want to maximize the sale price to obtain funds for other purposes. This can be done by agreeing to buy back the plant output at a high price. The higher the price paid for plant output, the higher the sale price of the plant. Some oversight over such sales seems necessary to protect consumers interests.

Why?

The rush to "deregulate" was initiated in the United Kingdom (U.K.). Claims were made of the benefits which were blindly accepted in the USA and worldwide. The results of the U.K. changes were huge profits to the new owners and higher prices to

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consumers.[6] The huge profits have been used to buy systems and plants throughout the world.

Large industrial users in the USA were concerned with unfair rate structures in most states which overcharged industry and undercharged residential consumers. Their concern was solely to lower their electricity costs. They saw the introduction of competition as a means to do this. They shortsightedly failed to consider the increased costs to achieve this and the impact on our overall economy.

The economists, lawyers, and those with commercial interests took over control of policy for electric power. The political approach of input from "stakeholders" gave controlling influence to those with large amounts of money at stake. The need for technical competence in setting policy was not recognized. No one represented the average consumer. The overall concern was with commercial and legal questions, not technical questions. The lack of knowledge and investigation of potential effects by legislators, regulators, was an important flaw. The press parroted analogies with other businesses which had vastly different characteristics. Our universities were dominated by economic theorists who would not listen to those questioning their views.

Utilities were won over by promises of huge payments for stranded costs. The California utilities originally opposed the restructuring plans proposed by the legislature, recognizing they would increase costs. They agreed to support the restructuring plan after agreement they could recover a $26 billion stranded cost settlement.

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Conclusions

A significantly increasing portion of the nation is realizing that the promises of lower electricity prices of those who advocate the restructuring of the electric power industry were grievously in error. The "gurus" at our universities, the high ranking government officials, and those in the industry (both independent power suppliers, large industrial firms, and in existing utilities) saw this as an opportunity to obtain considerable economic or potential benefits for themselves or their companies. Many made ridiculous analogies with the electric power business to other businesses. They provided considerable misinformation (e.g., the Federal Reserve Bank's latest publication on the electric power industry). Their activities lead to reduced research in the electric power technology, and reduced funding for education for the new generation of engineers required to develop our new electric power technology.

The changes resulting in these massive errors were a reaction to many years of unfair regulation by often incompetent regulators, many of whom were concerned with their political and professional futures rather than protection of the consumers. A system which did not reward good management and penalized some companies unfairly led to the need for change. Unfortunately the changes made have resulted in a new system which results in higher costs, which produces higher profits, and must increase prices. We jumped from the frying pan into the fire.

The concern with profits now, rather than long-term minimum costs, in a business with the time constants of the electric power industry was doomed to cause the public severe harm. We are now facing a turbulent future. The egg cannot be unscrambled. What we need to do is to save what is good, remove what is bad, and restructure the rest.

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We need a close examination of the formulation of customer-owned cooperatives as a solution to our bulk supply problems. We need to reintroduce technical competence into the policymaking procedures. We need to drop the ridiculous regulatory requirement that those who have experience in the management, planning, design, and operation of our electric power systems cannot serve in positions on the boards of directors for our reliability councils, ISO's, RTO's, and other governing organizations. We need to bring back technical competence and concern for the overall public interest.

NOTES:

1. The author requests that any having specific data related to the costs and benefits of restructuring send it to him. Information collected will be compiled with a copy sent to all who contributed.

2. A novel written by the author entitled "Sham? Shame!" will be published shortly which will provide insight into the people who have been involved and the intimate events which lead to the developments discussed in this article.

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TABLE I
Extra National Costs from Restructuring

	Annual Cost Increase Billion $/Year
Capital Related Costs (Table II)	11.4
Operating Related Costs (Table III)	13.3
Administrative Costs (Table IV)	3.1
Annual Cost Increases to be recovered by electric supplier from customers.	27.8
Reliability related costs borne directly by customers (Table V)	6.0
Total Annual Cost Increases	33.8
Required Increase in Electricity Costs:	
Annual National Electricity Use:	3,240 billion Kwhr
1999 Average National Electricity Cost:	6.66¢/kwhr
Increase Required by Restructuring:	$27.8 Billion
	.85/kwhr
Increase Required by Restructuring:	13%

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TABLE II

National Annual Capital Cost Increases Resulting From Restructuring

	Annual Cost Increase Billion $/Year
* Purchases of Generation Assets Above Book Value (includes increases in investment, increase in return on investment, associated consulting, financing, and legal costs)	$6.2
* Extra Generating Capacity Required (more capacity required for increased uncertainties, decreased coordination, transmission limitations, and to provide an improved competitive market)	$2.2
* Mergers (includes payments for consulting and legal advice, financing costs, golden parachutes for executives, early retirement costs for staff reductions)	$1.1
* Unbundling (includes accounting, consulting, and legal fees)	$0.3
* Stranded Costs (includes extra costs for buyouts of power purchase contracts mandated by government and early payment for regulating assets)	$1.0
* Metering Costs (extra metering costs required to facilitate retail wheeling)	$0.6
TOTAL EXTRA CAPITAL COSTS:	$11.4

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TABLE III

National Annual Operating Cost Increases Resulting From Restructuring

	Annual Cost Increase Billion $/Year
*Establishment of ISOs, RTOs, TRANSCOs (includes recovery of start-up costs, additional software costs, extra annual operating costs, increased costs for NAERO and reliability councils)	$1.1
* Energy Costs (extra costs for payments based on highest bid price rather than actual bid price for portion of nation where this is done, for scheduling dispatch based on prices instead of incremental production costs, and for increased transmission losses)	$9.7
* Power Exchanges, Marketing Organizations (includes initial costs plus annual operating costs)	$1.2
* Hedging Contracts, Risk Minimization (extra costs for hedging contracts, for risk minimization services, and for futures contracts)	$1.2
* Transactions Cost (extra costs for billing complexities resulting from wheeling and customer choice)	$0.1
TOTAL EXTRA OPERATING COSTS:	$13.3

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TABLE IV
National Annual Administrative Cost Increases

	Annual Cost Increase Billion $/Year
* Costs for Extra Hearings, Filings (includes costs for legal services, staff, and lobbying)	$0.6
* Coordination Contracts (extra costs for coordination contracts to achieve system coordination with competition and unbundling)	$2.5
TOTAL EXTRA ADMINISTRATIVE COSTS:	$3.1

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TABLE V
National Annual Reliability Related Extra Costs

	Annual Cost Increase Billion $/Year
*Increases in Interruptions and Power Curtailments (extra costs occurring to consumers)	$5.0
* Loss of Life to Customers Equipment (loss of life for motors from increased heating during voltage reductions)	$1.0
TOTAL EXTRA RELIABILITY COST:	$6.0

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TABLE VI
National Annual Cost Reductions from Restructuring

	Annual Cost Decrease Billion $/Year
* Reductions In Capital Costs (including reductions in capital costs for new plants, improvement from reductions in generator down time, and reductions in transmission additions)	$0.9
* Reductions in Operating Costs (including improved efficiency of existing thermal plants, reductions in labor costs less increase in contract labor)	$3.0
* Reductions From Mergers	$1.5
* Reduction in Debt Costs From Securitization	$1.5
TOTAL REDUCTIONS:	$6.9

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REFERENCES:

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2. Dr. Eugene Coyle, Price Discrimination, Electric Redlining, and Price Fixing in Deregulated Electric Power, American Public Power Association, January 2000, p. vii, viii.
3. J.M. Keynes, "The End of Laissez-faire" in *The Collected Writings of John Maynard Keynes, Vol. 9, Essays in Persuasion,* London, The Macmillan Press, 1972, p. 284 .
4. Ibid., pg. 35.
5. J.A. Casazza, "Technical Competence Engineering Leadership and Electric Power", IEEE AES Systems Magazine, February 1992, pg. 3.
6. J.A. Casazza, "An American's View of the Reorganization of the ESI," IEEE Power Engineering Journal, April 1997.

27777

2001-005249

Cinergy Corp.
139 East Fourth Street
Suite 3019
P.O. Box 960
Cincinnati, OH 45201-0960
Tel 513.287.2888
Fax 513.287.3116

JAMES E. ROGERS
Chairman, President &
Chief Executive Officer

CINERGY.

February 23, 2001

The Honorable Spencer Abraham
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Abraham:

Thank you for taking time to meet with me and my fellow CEO's to discuss comprehensive energy legislation as well as environmental legislation for coal-fired power plants.

We look forward to working with you over the next few months to help create a much needed national energy strategy that properly balances both our environmental goals and our energy needs.

In this regard, I have enclosed a recent editorial piece that I wrote for the Indianapolis Star that discusses the importance of comprehensive environmental legislation in the context of establishing a national energy policy. It touches upon many of the points we discussed during our meeting. Also enclosed is a copy of our annual report for 2000.

Thanks again for your attention to these important issues.

Best,

Enclosures

27778

THE SECRETARY OF ENERGY
WASHINGTON, D.C. 20585

February 23, 2001

2001-004565

Mr. Glenn English
Chief Executive Officer
National Rural Electric
Cooperative Association
4301 Wilson Boulevard
Arlington, VA 22203-1860

Dear Mr. English:

Thank you for your letter of congratulations. I appreciate your taking the time to write.

I look forward to serving the Bush Administration and the Nation as Secretary of Energy.

With best wishes.

Sincerely,

Spencer Abraham

Spencer Abraham

Printed with soy ink on recycled paper

2001-005451 2/27/01 4:24 b6 005451

Secretary, The

From: Tzefer...
Sent: Monday, February 26, 2001 6:11 PM
To: Secretary, The
Subject: U.S. Energy Policy Development

Hello. My name is Steven Tzeferakos and I am an economist with Industry Canada HQ, (a federal government department here in Ottawa, Canada).

My director has requested that I begin to look into current and future U.S. energy policy developments, (at the moment, primarily in regards to the 'Cheney Energy Task Force'-National Energy Policy Development Group which Mr. Abraham is a member of). There seems to be some material out there but I'm not quite sure how reliable some of it is. Would you be able to provide me with detailed information (reports/briefings) in regards to these initiatives, their aims, current progress/findings and related upcoming developments in this process?

Information on near term anticipated releases &/or upcoming meetings would be of use in ensuring that the Assistant Deputy Minister is up-to-date and doesn't miss anything over the next little while. (For example, I believe that in the near future there will be a House Energy Subcommittee hearing on National Energy Policy this Wednesday, and a 'Problems Report' issued by the Policy Development Group on March the 10th?) Do you have such information or know of the appropriate contacts who could help me in this matter? Your suggestions and assistance would be greatly appreciated.

Sincerely,

Steven A. Tzeferakos

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February 26, 2001 2001-005412 Feb 27 p 12:24

NOTE TO THE HONORABLE SPENCER ABRAHAM AND ANDREW LUNDQUIST

FROM: J. Robinson West

RE: Comments and Suggestions for Bush/Cheney Energy Policy

Per our discussion, there are several basic concepts which should be kept in mind and underpin an energy program.

1. The current energy crisis took a long time to create and it will take a long time to solve.
2. The solutions should be based on market forces, which the Administration can facilitate.
3. The government already has a role in markets (access to land, taxation, environmental regulation, etc) so that the argument of "keeping government out of it" is nonsensical. The key question is what is the appropriate role for government? Doing nothing may simply reinforce existing distortions.
4. Diversity of supply equals security of supply.
5. The Bush Energy program cannot be seen as anti-environment.
6. Impacted local communities should receive some rewards, not just all of the risks, of energy developments.

Some specific thoughts include:

1. Create the position of Energy Infrastructure Coordinator (EIC) in the White House, with a specific purpose of expediting all elements of federal review and permitting for any project to be deemed of national energy significance. The basic concept would be to ensure that the federal government provides the minimum bureaucratic resistance, as appropriate, to energy projects. The EIC would have a network of energy coordinators in each relevant department and agency, and there would be specific deadlines and mechanisms to encourage accountability. It would also be useful for each state to name an appropriate official responsible to the Governor so that there would be a Federal-State partnership to expedite project development. A partial model for this role can be found in the Energy Mobilization Board legislation of 1980, which was draconian in its powers over the states. (See attached material)
2. Interstate electric transmission is a crucial issue. Federal eminent domain authority for natural gas pipelines do not apply to electricity. New approaches might include:
   A. New transmission lines needing federal siting assistance would be identified by FERC approved RTOs as part of their comprehensive resource planning process.
   B. Vest the federal power marketing agencies and federal entities such as TVA with new authority to construct such lines with limited ability to waive state and local need determinations, siting and permit requirements. Based on a valid RTO request, the Secretary of Energy would designate the appropriate federal entity to assume lead responsibility for line development.

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C. By legislation, give federal eminent domain to IOUs to build RTO-approved projects.

D. Require consolidation of federal-state (including multi-state) environmental review.

E. I would also urge that the Administration encourage merchant transmission lines to be built by investors who charge negotiated rates. Furthermore, since the investors would be at risk and thus have no market power at the inception of the project, there should be no "open season" forcing them to size the project against their commercial interests.

3. The "Balkanization" of electricity regulation among the states is a serious problem which must be resisted. I would propose the creation of a program which would collect data on electricity regulation regimes, evaluate them and make a recommendation for key elements which should be included in each state regulatory program. This process would be co-chaired by a governor, perhaps Tom Ridge of Pennsylvania and an energy industry executive such as Ken Lay of Enron. The idea would be to create a system of state regulations which is mutually compatible, but each state would be responsible for designing its own system. Furthermore, states would be incentivized to comply with the program by offering powerful incentives such as no FERC requirement that neighboring states interchange power, penalties for capacity shortages, reduced federal grants, etc.

4. Related to the above, the Administration should encourage a model consumer transparency statute for states to adopt that requires electric companies to break out separately the costs of fuel/purchased power and generation capacity (depreciation, O&M, overhead, transmission/distribution costs, and margin), etc.

5. I'd suggest that the FERC, the Attorney General and whatever appropriate authorities analyze any potential instance where IPP operators may have been keeping their capacity off-line for more than necessary maintenance. If it should be proven that the operators are "gaming" the system, there should be serious penalties such as loss of licenses.

6. Consider establishing a Sallie-Mae type quasi-government agency which would later be privatized, to create a web-based efficient and simple market in fuel oil/natural gas/gasoline/electricity hedging instruments that small and medium sized businesses, and perhaps even individuals, can use to minimize, or make predictable, their future energy costs. This would give the small consumer the tools and power to manage energy risk. (Details to follow)

7. The issue of fuel specifications has become completely unmanageable with a multiplicity of differing state regulations on MTBE and oxygenates. We are creating artificial shortage through regulation. I would suggest creating a commission with several governors, oil industry executives, representatives of the scientific community and the agriculture community, as well as the Secretaries of Agriculture, Energy and EPA to develop a strategy for fuel specifications. Dave O'Reilly of Chevron and Clarence Cazalot of Marathon would be the two best industry chairmen to work with on this issue. The commission should have a short fuse (120 days) to study the issue and report back. Based on the commissions report, legislation would be introduced as necessary, federal regulations written consistent with it and hopefully state regulations as well. There should be clear incentives for the states to comply, such as withholding of some federal highway funds, since this is a critical transportation issue.

8. To encourage international exploration by US companies for increased diversity of supply, the Administration should A) set clear standards on sanctions (no unilateral sanctions and sunset provisions) and B) clarify the issue of foreign tax credits to avoid double taxation, substantially disadvantaging U.S. companies.

9. I would suggest tax incentives be kept to a minimum for the oil and gas industry with the exception of adjustments made to eliminate distortions caused by the existing tax code.
10. The natural energy market is North America including Canada, Mexico, Trinidad, Venezuela and Colombia. This could be particularly significant for the LNG business. To focus on Mexico alone is a mistake. If interested, we can help you design a regional strategy.
11. I believe that the Administration must put forward an energy program which is seen as constructive from an environmental standpoint as well. The Administration should present a different approach than Kyoto, with a carbon emissions program which includes coverage of China and India, emissions trading and the use of sinks. I urge that the Administration be creative and flexible, and be seen as sensitive and seeking market based solutions to this difficult issue, which cannot be ignored.
12. The federal government, including the U.S. military, has substantial land which could be used to site energy projects (power generation, refineries, etc.). This should include surplus land, as well as unneeded or excess land on operating government sites. The government is holding land it doesn't need.
13. Incentives should be offered to local communities, not just the states, to encourage energy project developments. For example, coastal communities should receive some of the bonus and royalties from offshore lease sales. Currently, communities bear the risks but get no direct benefits, thus having no incentives to support energy development.

I hope that some of the above suggestions are useful. We would be happy to expand on them further should there be interest. Also, as I mentioned, we can help pull together policy documents or speeches if you need some support.

I look forward to hearing from you.

As a central element in his strategy for restoring national energy security, President Carter has proposed establishment of an Energy Mobilization Board in the Executive Office of the President. Modeled on the War Production Board of World War II, the EMB will, in the President's words, "...slash through red tape and bureaucratic obstacles and set absolute deadlines for actions at the Federal, State and local levels."

The Permitting Maze

Without an effective EMB, the President's import reduction goals cannot be met. Federal, State, and local regulation has become so complex that, for example, a geothermal power plant on the West Coast could involve at least 25 agencies, 12 public hearing requirements, multiple environmental impact statement requirements, and 12 potential opportunities for judicial challenge. Other major energy facilities, such as oil refineries and synthetic fuel plants would face similar propects. To clear these labyrinths and bring a plant on line could take at least a decade, and this could increase if a project is controversial. At this rate, it could be well past 1990 before substantial new energy capacity can be generated from alternative fuel sources.

- The Sohio Example -- Indeed, already, major projects have foundered simply because of the time, uncertainty, and resultant costs inherent in the approval process. In March of this year, for example, Sohio announced the abandonment of its five year, $50 million effort to secure the more than 700 permits necessary to revamp an existing pipeline from California to Texas to carry California and Alaskan crude oil to midwestern and eastern markets.

A Systematic Solution: The Energy Mobilization Board

Comprehensive new legislation is needed to assure that critically needed energy facilities receive prompt and priority attention from permitting agencies at each level of government. Prompt decisions -- whether yea or nay -- are essential to effective implementation of energy policy.

- Purpose of the Board -- The EMB will meet this need. Its purpose is simple: to designate critical, nonnuclear energy facilities and, for each of them, to convert disparate, disconnected proceedings and requirements into a single, coordinated decision process, expedited as much as possible, without

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altering the substantive Federal, State, or local standards pertinent to securing the requisite permits.

The Board would be responsible for designating proposed energy facilities as critical to achieving national import reduction goals, and then to fix and enforce a schedule for the completion of permit decision-making on the designated facilities. No more than 75 projects could be designated at any one time.

Under the President's proposal, the Board would include three members appointed by the President and confirmed by the Senate, each serving at the pleasure of the President. One member would be designated Chairman by the President.

o Authorities Needed for Fast-Track Permit Decisions -- The President's proposal gives the EMB five basic authorities. Each of these is essential to creating a "fast-track" mechanism which is both effective in streamlining the permitting process, and balanced in maintaining applicable substantive law and minimizing changes in governing procedures. It is crucial that Congress give the Board the legal tools it needs to do the job; otherwise, the EMB could become another bureaucratic layer, and even compound the problem it is supposed to solve.

The five key features of the President's proposal are:

-- The EMB should have authority to establish a project decision schedule, binding on Federal, State, and local permitting agencies, for projects it designates as critical to the Nation's import reduction targets.

-- The EMB should have authority to waive, modify, or consolidate procedural requirements, including environmental impact statements, where such steps can be taken without curtailing adequate consideration of legally pertinent issues and without cutting off opportunity for participation by interested persons.

-- The EMB should have authority to enforce its schedule, by substituting itself for an agency

which fails to meet applicable deadlines, and making the agency's decision itself -- in accordance with applicable substantive law. If, however, a Federal, State or local agency reaches its decision on time, the EMB has no authority to overrule or change that decision.

-- For all decisions on projects designated as critical, judicial challenges should be consolidated in one Federal Court of Appeals in which the project is located and in one proceeding after the permitting process is complete, unless the EMB determines that an earlier individual suit is necessary to expedite the process or assure fairness.

-- Once the necessary approvals are secured and construction has commenced, the EMB would be able to waive or modify new or changed substantive requirements, if waiver or modification is necessary to ensure timely and cost-effective completion. The waiver authority may be exercised only on a case-by-case basis and is subject to Presidential veto.

The need to give the President a Board with the authority outlined above is widely recognized. Without it, the program to provide our basic domestic energy needs will be unnecessarily delayed by the current permit process. With an effective EMB, the Nation can move decisively on projects which are vital to our national security.

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IV. THE ENERGY MOBILIZATION BOARD

The Administration has already acted under existing authority to reduce delays in the permitting of critical energy facilities. These actions already taken include:

o Procedures for setting decision schedules for critical energy facilities were established in April 1979 under the direction of the Office of Management and Budget.

o Regulations reforming and streamlining requirements of the National Environmental Policy Act (NEPA) were issued by the Council on Environmental Quality in November 1978.

o A Cabinet-level Energy Coordinating Committee chaired by the Secretary of Energy was established by Executive Order in September 1978.

In order to meet the 1990 targets for oil import reduction, however, substantial additional authority is needed to accelerate the development of the domestic energy production capacity. The President will submit legislation to Congress to create an Energy Mobilization Board (EMB). The EMB will have three members and will be located within the Executive Office of the President. EMB members will serve at the pleasure of the President and will be confirmed by the Senate.

The Board will be authorized to designate certain non-nuclear facilities as critical to achieving the nation's import reduction goals and to establish binding schedules for federal, state, and local decision-making with respect to those projects. Judicial review of EMB decisions will take place in the Court of Appeals for the Circuit in which the facility is located on an expedited basis.

If a federal, state or local agency fails to act within the specified time frame, the Board will be empowered to make the decision in place of the agency, applying the appropriate federal, state or local law. The Board also will have the authority to waive procedural requirements of federal, state, or local laws in order to expedite the development and construction of a critical energy facility. To avoid delays once construction has begun, the Board could also waive the application of new substantive or procedural requirements of law which come into effect after the construction of a project has commenced. These waivers would be granted on a case by case basis. Any EMB exercise of its waiver authority would be subject to Presidential veto.

more

V. HEAVY OIL

The United States has an estimated reserve of over 10 billion barrels of heavy oil, a highly viscous, almost tar-like crude which must be heated to be produced. Much of this reserve is in California. Heavy oils are more expensive than conventional crude oil sources both to produce and to refine, though a range of good quality refined products can be produced from this source.

The President is directing the Department of Energy to decontrol heavy oil immediately. Heavy oil also would be exempt from the Windfall Profits Tax, thus allowing it to receive the full world oil price. In addition to this price incentive, the Department of Energy will take steps to assure that natural gas will be available for the production of heavy oil within current environmental constraints.

With these actions it is estimated that 500,000 B/D can be produced from this source by 1990. This initiative will have relatively little budget impact, since little heavy oil would be produced if this source were covered by the Windfall Profits Tax. While the costs of producing heavy oil varies depending on site-specific reservoir features and recovery techniques used, the Administration estimates significant recovery at or just above the current world oil price. Heavy oil production is not included within the scope of the corporation, since it is basically an extension of existing oil production technology, since the location of reserves is relatively well defined, and since decontrol and the tax exemption are sufficient incentives for its production.

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VI. UNCONVENTIONAL GAS INITIATIVES

Recognizing the extremely large potential gas resources in the U.S. that exist in unconventional formations, such as tight sands, devonian shale, geopressurized methane and coal seams, the President has proposed the following initiatives, in addition to activities which the Energy Security Corporation can take, which will significantly accelerate large scale production of these reserves:

- The President, through the Department of Energy will seek action from the Federal Energy Regulatory Commission (FERC) to establish a special incentive price for natural gas from tight sands comparable to the deregulated oil price. Although the Natural Gas Policy Act deregulated other sources of unconventional gas, tight sands were not included.

- Should the FERC fail to act on this request, the Administration will seek an amendment to the Natural Gas Policy Act to deregulate such gas.

- In order to accelerate more rapidly the production of these resources, a $0.50/mcf tax credit is proposed for all unconventional gas production. The tax credit will phase out at a world oil price equivalent of $28 per barrel.

- The Energy Security Corporation is authorized to provide assistance for development of unconventional gas reserves if it determines that additional incentives are needed to meet 1990 targets. Unconventional gas producers receiving assistance from the Corporation would not, however, be eligible for the 50¢/mcf tax credit.

Production resulting from these incentives is estimated at 1 tcf to 2 tcf, or .5 to 1 MMB/D oil equivalent.

The major sources of unconventional gas are:

- Tight or low permeability gas basins in the Rocky Mountains region.
- Devonian shales of the Appalachian Basin.
- Methane from coal seams.
- Methane from geopressurized aquifers in the Gulf of Mexico.

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The technology involved in the recovery of gas from tight sands and Devonian shale expands natural fractures in the gas holding formations. Methods of recovery include explosive and hydraulic fracturing and the drilling of deviated wells. Even now these sources make a significant contribution to domestic production (which totals about 20 TCF) of about 1 TCF per year. Although production efforts appear to be accelerating, particularly in the Western tight gas sands basins, uncertainty about deregulation of tight gas production and the inability of certain potential users to enter into long term gas supply contracts constrain expanded exploration and production. In general, development of these reserves was discouraged by natural gas pricing policies in effect prior to the enactment of the Natural Gas Policy Act.

Although estimates of the potential production of geopressurized methane from the Gulf of Mexico varies, most experts agree that at least 150 to 220 trillion cubic feet (TCF) of additional gas could be recovered from these sources at costs between $15 to $30 per barrel of oil equivalent. The recoverable resource could prove to be much larger. The technology for producing this gas requires further development.

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MILLER ENERGY, INC.

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
Robin Johnston	Brandi Miller
COMPANY:	DATE:
Secretary of Energy Spence Abraham	02/26/2001
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:
202-586-7573	1
PHONE NUMBER:	
202-586-5534	616-324-3390 (phone)
RE:	
Scheduling Meeting Times	616-324-3584 (fax)

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT X PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Robin,

I would like to schedule a meeting with the Secretary of Energy, Spence Abraham together with C. John Miller from Miller Energy, Inc. and Bill Myler Sr. from Muskegon Development Company. The purpose of this meeting is to discuss the Energy Policy. They will be in Washington D.C. on March 13 and would like to meet between the times of 2:30 pm and the latest time to schedule a meeting. Please call and advise if you can arrange a meeting during these times.

Thanks

941-396-6632

C. W. BILL YOUNG, FLORIDA, CHAIRMAN
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Congress of the United States
House of Representatives
Committee on Appropriations
Washington, DC 20515–6015

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CLERK AND STAFF DIRECTOR
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TELEPHONE
(202) 225-2771

February 28, 2001

2001-005837 Mar 5 A 9:30

LarryPettis
Acting Administrator
Energy Information Administration
1000 Independence Avenue, SW EI-1
Washington, DC 20585

Dear Mr. Pettis:

The House Interior Appropriations Committee will hold a hearing at 10:00 a.m. on Thursday, March 29, 2001, on the need for, and the suggested content of, a balanced National energy policy. The hearing will take place in Room B-308 of the Rayburn House Office Building. Because of your expertise in the energy area, I am inviting you to be a witness at the hearing.

I plan to start the hearing with a brief outline of the latest Annual Energy Outlook forecast by the Energy Information Administration. After that, there will be a panel of three experts. Each panelist is asked to talk about what our National energy strategy should include and why past policies may have been less than rousing successes. Finally, there will be questions from members of the Committee and, hopefully, a lively exchange of ideas among the panelists and Committee members.

I ask that each panelist make opening remarks of about 10 or 15 minutes so that we will have ample time for questions and discussion after all the panelists have spoken. I anticipate that the hearing will last no longer than three hours.

We ask that you send us a copy of any prepared statement that you would like included in the hearing record by March 23, 2001. You can email your statements to Loretta.Beaumont@mail.house.gov and, if you have any questions about the hearing, Loretta can be reached at (202) 225-3081. If you choose to send your statement by regular mail, the address is:

House Interior Appropriations Subcommittee
Attention: Loretta Beaumont
B-308 Rayburn HOB
Washington, DC 20515

27792

Thank you for your participation. I look forward to hearing your views on this critical issue.

Sincerely,

Joe Skeen
Chairman
Subcommittee on Interior
and Related Agencies

Identical letters sent to The Honorable Henson Moore, The Honorable Philip Sharp, and Red Cavaney

BARBOUR GRIFFITH & ROGERS, INC.

TENTH FLOOR
1275 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20004

HALEY BARBOUR
CHAIRMAN &
CHIEF EXECUTIVE OFFICER

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HALEY_BARBOUR@BGRDC.COM

March 1, 2001

MEMORANDUM TO VICE PRESIDENT DICK CHENEY

FROM: HALEY BARBOUR

RE: BUSH-CHENEY ENERGY POLICY & CO_2

For the eight years of the Clinton Administration environmental policy prevailed over energy policy, to such an extent that Governor Bush said in the campaign that there was no energy policy in the Clinton-Gore Administration.

The country has serious energy problems; some parts of the country have an energy crisis. The Bush-Cheney Administration has publicly recognized the severity of the energy problems, and a task force has been set up to address the problem, headed by you, the Vice President.

A moment of truth is arriving in the form of a decision whether this Administration's policy will be to regulate and/or tax CO_2 as a pollutant. The question is whether environmental policy still prevails over energy policy with Bush-Cheney, as it did with Clinton-Gore. Demurring on the issue of whether the CO_2 idea is eco-extremism, we must ask, do environmental initiatives, which would greatly exacerbate the energy problems, trump good energy policy, which the country has lacked for eight years?

Clinton-Gore policies meant less energy and more expensive energy. Most Americans thought Bush-Cheney would mean more energy and more affordable energy.

cc: Andy Card
Director Mitch Daniels
Karl Rove
Josh Bolten
Larry Lindsey

cc: Nick Calio
Secretary Don Evans
Secretary Spencer Abraham
Secretary Gale Norton
Andrew Lundquist
Lezlee Westine

MILLER ENERGY, INC.

2001-006393 Mar 8 p 3:47

March 5, 2001

Secretary of Energy Spencer Abraham
US Department of Energy
1000 Independence Ave SW
Washington, D.C. 20585

Dear Mr. Secretary:

Thank you for inviting me to attend your swearing in ceremony, it was a most impressive time. A long time employee for the Department of Energy who was in front of me for the photo-op said this was the 4th swearing in ceremony he had witnessed and commented that he felt that there were as many people at yours as the other 3 combined. It was particularly nice to see so many of your family and Michigan friends represented.

I also enjoyed the opportunity of spending a few moments with former Secretary of Energy James Schlesinger and Admiral Watkins, as I had the opportunity of working with both of them during their service as Secretary of Energy.

I wanted to thank you and Jane for including me at the dinner at the Monocle.

As I indicated to you in our brief conversation, I would like to be of service to you in any way that I can help. Joe McMonigle and I had a very brief conversation and I advised him I intend to be in Washington D.C. on March 13 & 14 and would be glad to discuss any opportunities of service with him. I will await his reply.

Again, I want to congratulate you on this new position and I wish for you a very successful and happy term of office.

Sincerely,

John Miller / bmm

C. John Miller

CJM/bmm

H: political\Abraham,S\bxswearing in ceremony

7900 MOORSBRIDGE RD. PORTAGE, MICHIGAN 49024 PHONE (616) 324-3390 FAX (616) 324-3586

ROUGE STEEL COMPANY

2001-006068 Mar 6 p 1:33

Carl L. Valdiserri
Chairman and
Chief Executive Officer

3001 Miller Road
P.O. Box 1699
Dearborn, Michigan 48121-1699

March 6, 2001

The Honorable Spencer Abraham
Secretary
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

Dear Secretary Abraham:

First and foremost, on behalf of the 2,900 employees of Rouge Steel Company, I would like to congratulate you on your appointment to lead the Department of Energy. Please accept our best wishes for success in one of the more challenging and important cabinet assignments.

As you are aware, the domestic steel industry is in a crisis of major proportions. Eleven domestic steel producers have been in bankruptcy over the past two years and some industry analysts are predicting that 50% of our Country's integrated steel making capacity could be in bankruptcy by Easter. While much of the blame for this calamity has been focussed on the recent historic levels of illegally dumped and unfairly traded imports, rocketing energy prices have seriously exacerbated the problem – so much so that the current run up in natural gas prices has seriously threatened Rouge Steel Company and the livelihoods of our 2,900 employees and their families.

Rouge Steel requires an extraordinary amount of natural gas to fuel its blast furnaces, Hot Strip Mill reheat furnaces and Finishing Operation annealing furnaces. In 1999, the Company paid an average of $2.86 per MCF for natural gas. By late 2000, natural gas spot market prices rocketed to over $9.00 per MCF, bringing the average for the year to about $6.50 per MCF. Every $1.00 per MCF increase in the average annual cost of natural gas increases Rouge Steel's operating costs by $20 million per year and there is no corresponding opportunity for recovery through higher steel prices. To compound the problem, unabated natural gas costs are beginning to find their way into the costs of electricity, since the only significant expansion of power generation capacity in the U.S. in recent years has been in natural gas fueled power plants.

Since June 1999, electricity prices have been anything but stable. Southeastern Michigan is a rapidly expanding region of the Great Lakes area and the demand for power is simply outstripping the supply. From a steel industry perspective, the only affordable electricity in Southeastern Michigan is offered on an "interruptible" basis and interruptible power has resulted in the shutdown of some our key manufacturing processes during summer periods of high demand. Local utilities are then forced to wheel in power from other states during the peak demand periods at outrageous premiums.

Rouge Steel has not stood idly by. In fact, we joined with Ford Motor Company in a requirements supply agreement with CMS Energy, who agreed to construct a new $400 million co-generation power plant adjacent to the Rouge Complex in Dearborn, Michigan. Construction plans were already underway when the Rouge Complex Powerhouse (jointly owned by Ford and Rouge Steel) was tragically idled on February 1, 1999 by an explosion and fire. Notwithstanding our commitment to secure competitively priced power, we continue under siege by the public utilities – now in the form of "stranded costs" or "retail operating access" charges. Detroit Edison, the local public utility, has been granted the authority by the Michigan Public Service Commission, to assess a 20% premium charge on the power delivered from a source other than Detroit Edison, despite the fact that Detroit Edison has demonstrated that it cannot meet our demands for reliable and competitively priced power.

Energy and international trade are critical policy issues facing the Bush Administration and Administration leadership and direction on these issues will have a profound impact on the domestic integrated steel industry and our Country's economic well being in the months and years ahead. Frankly, without the Administration's support, raw steel production in the U.S. will continue to decline as investment in blast furnaces will no longer make financial sense. Is the United States prepared to rely on China, Brazil and third world countries for its semi-finished steel in times of national emergency or crisis? Is our country willing to sacrifice thousands and thousands of good paying U.S. jobs to maintain a model for global trade to which few other countries are willing to abide?

After eight years of inaction by the Clinton Administration, the United States desperately needs an energy policy that encourages the exploration and expanded production of energy to meet the appetite of our growing economy. What Rouge Steel needs is (i) a stable and affordable supply of natural gas, and (ii) a reliable and competitive supply of electricity.

You have a unique opportunity to shape the future direction of our Country and impact in a positive fashion the jobs, families and communities that depend on a viable and prosperous domestic steel industry and economy. If I can be of any assistance whatsoever, please don't hesitate to contact me directly.

Sincerely,

Carl L. Valdiserri

The Secretary of Energy
Washington, DC 20585

March 14, 2001

2001-005412

Mr. J. Robinson West
Chairman
Petroleum Finance Company
1300 Connecticut Avenue, NW
Suite 800
Washington, DC 20036

Dear Robin:

Thank you for sending your comments and suggestions regarding the Bush/Cheney Energy Policy. You have presented many thoughtful and useful insights.

As a member of the National Energy Policy Development Group established by President Bush, I am committed to the development of a national energy policy. I appreciate your efforts to provide assistance, and I look forward to your continued thoughts and support.

With best wishes.

Sincerely,

Spencer Abraham

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2001-005350 2/26/01 4:29 005350

RESOLUTION NO. 01-1130

A RESOLUTION TO REQUEST UNITED STATES SENATORS FRED THOMPSON, BILL FRIST AND UNITED STATES CONGRESSMAN BART GORDON, THE U. S. DEPARTMENT OF ENERGY SECRETARY SPENCER ABRAHAM AND THE U. S. SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES TO FORMALLY INVESTIGATE AND TAKE APPROPRIATE ACTION TO REMEDY THE NATIONAL ENERGY CRISIS AND HIGH WHOLESALE COST OF NATURAL GAS

WHEREAS, natural gas is an essential end-use fuel that heats the homes, schools and businesses in our community, and it is also an essential source fuel that provides the energy for many industrial processes including electric generation; and

WHEREAS, in the past, policy makers failed to (1) adopt a path towards adopting a sound energy policy that ensures both reasonable prices and a stable supply of natural gas, and (2) take the necessary actions to avoid placing American citizens in another cycle of "boom and bust" that will deprive them of this essential fuel; and

WHEREAS, in the past, policy makers were reluctant to investigate why this competitive market did not work and placed consumers and producers at the end of a pendulum that was swinging between price extremes; and

WHEREAS, the price spike at the natural gas wellhead that is causing natural gas prices to increase is substantially above what United States natural gas producers themselves say is sufficient to explore, drill, and deliver natural gas supplies to the various states, including Tennessee; and

WHEREAS, the recent consolidation among the major oil/gas producers, as well as other segments of the industry, gives rise to concerns that exorbitantly high prices are the result of a market led conspiracy; and

WHEREAS, the natural gas NYMEX contract is one of the most popular speculative commodity vehicles today, but speculation in natural gas prices may be fueling price volatility, if not price manipulation; and

WHEREAS, natural gas is the source fuel for 90% of the electric generation scheduled to come on-line over the next twenty years and could threaten natural gas supply and prices for those consumers that use natural gas as a primary fuel; and

WHEREAS, such exorbitantly high natural gas prices are having an adverse impact on the disposable income of American citizens in the various states, affecting many Americans' livelihoods, safety, and well being, and causing many of them to choose between staying warm, staying fed, or staying well; and

WHEREAS, the only fair conclusion at this time appears to be that the natural gas supply market place is dysfunctional and needs attention at the national level.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LEBANON, TENNESSEE THAT:

Section 1. Those national authorities named herein take immediate appropriate action to conduct a formal investigation, and remedy the cause of exorbitantly high natural gas prices which have had a profound adverse economic impact on the citizens of the various American states.

Section 2. Those national authorities named herein take immediate appropriate action to formulate a long-term national energy policy that results in reliable, cost-effective and secure energy for our citizens.

Section 3. This Resolution shall take effect immediately from and after its adoption, the public welfare requiring the same.

Attest:

Commissioner of Finance

Mayor

Approved as to form:

City Attorney

Passed On: February 20, 2001.

DON W. FOX, Mayor
City of Lebanon
200 Castle Heights Avenue North
Suite 100
Lebanon, TN 37087

JANE DEE HULL
GOVERNOR
STATE OF ARIZONA

2001-006411 Mar 9 A7:16

March 7, 2001

The Honorable Dick Cheney
Vice President of the United States
Old Executive Office Building
17th Street & Pennsylvania Avenue
Washington, D.C. 20500

Dear Vice President Cheney:

Thank you for your leadership of the President's Task Force on National Energy Policy and the positive steps the Administration has made on this issue in just a few weeks. I hope this letter finds you in good health and back at your desk.

As we discussed in your office a couple weeks ago, I have confidence that the State of Arizona will have an adequate supply of electricity this summer, provided we do not experience any unforeseen impact on the electric grid and the existing commitments of power to our state's utilities. At the same time, we value your work in identifying those areas in which the federal government could be helpful in the short and long term to ensure adequate energy for the entire West, including our neighbors in California.

In this regard, I want to bring to your attention the issue described in the attached article from this morning's edition of the Arizona Republic, our state's largest newspaper. This story is illustrative of situations we are encountering regularly as my fellow Western Governors and I seek to ensure that the West does not suffer from a region-wide lack of electricity this summer.

As with my colleagues in the Pacific Northwest, I am committed to the greatest possible protection of the environment in our region. At the same time, cumbersome federal regulations related to species protection are often contrary to the best interests of the environment and common sense. I would invite you to consider whether these regulations may be simply too costly (in both direct and indirect economic costs) at a time when rural parts of my state are facing 300 percent increases in their electricity bills for power they receive from the federal system.

1700 WEST WASHINGTON, PHOENIX, ARIZONA 85007
(602) 542-4331 • FAX (602) 542-7601 • WWW.GOVERNOR.STATE.AZ.US

Again, thank you for the effort and attention you've dedicated to the Western energy situation and, particularly, the future energy needs of our region. If I can be of further assistance in your work on this vital matter, please let me know.

Sincerely,

Jane Dee Hull

JANE DEE HULL
Governor

cc: Secretary of the Interior Gail Norton
Secretary of Energy Spencer Abraham
Arizona Congressional Delegation

enclosure

THE ARIZONA REPUBLIC
EDNESDAY • MARCH 7, 2001 azcentral.com 50 CENTS

Federal energy fund faces summer shortfall

By Judd Slivka
The Arizona Republic

Talk about a fish story.

A government-mandated study on the endangered humpback chub and a bushel of bad luck have drained about half of a $100 million fund used to cushion the rising cost of power processing in the West.

That has at least one official predicting that government money to buy power next summer is going to run out, making it harder for utilities to find affordable electricity. If they have to pay more for power, customers likely will, too.

"If it's a dry, hot summer, it could be really bad," said Dave Sabo, manager of the federal government's Colorado River Storage Project, which is part of the Western Area Power Administration.

The administration brokers federally produced energy in the West.

The money was lost when Glen Canyon Dam couldn't increase flows during the summer because of a mandated low-water flow test for the endangered humpback chub.

To make up for the unrealized power, the administration had to buy energy from an overheated open market, depleting its savings by $55 million last summer.

The situation highlights a defining struggle going on in the boom West: Trade-offs are everything. More power

See FEDERAL | Page A2

FEDERAL | Energy fund faces shortfall

From Page A1

can be generated, but at the cost of resources. More species can be restored, too, but at the cost of production.

Federal agencies — in this case the U.S. Bureau of Reclamation, which administers Glen Canyon Dam and the resulting Lake Powell reservoir — have all sorts of mandates to obey, from power supply to protecting endangered species.

They must strike a balance without offending too many constituents. Where those balances are found will define the West.

In the meantime, the Western Area Power Administration is expecting a long, hot summer, one in which its bank account will run dry.

"Going into next summer, I know I'm going to run out of money," Sabo said.

The problem trail

Next summer's problems started back in 2000.

Hydrologically, the past few years have been terrible for water flowing into Lake Powell. Add in California's deregulation, a scorcher of a summer and nearly a decade of high growth, and the stage was set for a Western-size tragicomedy.

Then came the fish test, part of a federally mandated biological opinion.

There are only about 4,300 humpback chubs in the Colorado River, and biologists have been trying to coax them into creating more of themselves.

Cold water

But since the dams were built on the river and flows are released from the bottom of the dam, the Colorado's water has become very cold.

That water tends to kill the chub as they swim from the warmer Little Colorado River into the Colorado River.

The biological opinion held that in a year when water flow was down, scientists and the Bureau of Reclamation could work together to find out if lower flows were better for the chub.

"With the low flows, we hoped to have slow water that is warmer and allow greater survival of the young, so we could get a greater recruitment of fish that could survive the first year so they can become spawners," said Jeff Humphrey, a spokesman for the U.S. Fish and Wildlife Service.

Three drought years in the Colorado River Basin made it easy to decide last year was the year for the study. There wasn't all that much water coming in, so it would be fine to limit it going out.

And so Glen Canyon Dam signed on to do the low-flow studies. After peaking at more than 30,000 cubic feet per second in May, flows were reduced to no more than 8,000 cfs until September.

Then the power crisis happened. California needed energy and looked, in part, to the federal government for help.

But because Glen Canyon didn't produce its expected amount because of the low-flow study, the administration was forced to buy on the open market.

The money drain

At the beginning of last summer, electricity was selling for about $30 a megawatt-hour. By the end of the summer, it was near $300 a megawatt-hour, and the administration was paying $12 million a month to buy needed energy when only $6 million had been budgeted for the entire year.

The revolving fund, into which profits are deposited, began draining.

By the end of last summer, $55 million had been taken from the $100 million account.

Government hydropower sales, bringing in $12 million to $14 million a month, have been rebuilding the fund, but not quickly enough to provide a cushion for next summer.

Adding insult to injury, California's winter power crisis has drained $71 million out of the fund just to keep up with demand.

The account now stands at about $38 million.

The Fish and Wildlife Service will release the preliminary results of the Glen Canyon study of the humpback chub in late April.

Reach the reporter at judd.slivka@arizonarepublic.com or (602) 444-8097.

27805

America needs workable energy policy

By William T. McCormick Jr.

The electricity crisis in California and the serious emerging national problem with natural gas prices and supplies are dramatic indications of the lack of a coherent U.S. energy policy for the past decade. In fact, while the economy has been expanding its energy use steadily since the early 1990s, our nation's energy supplies and the reliability of those supplies have become increasingly inadequate.

Some worrisome examples include:
U.S. oil production has steadily declined, and imports of foreign oil have risen from 8 million barrels per day in 1990 to 11 million barrels per day or to 57 percent of total U.S. oil consumption — the highest ever. Oil prices have risen to more than $30 per barrel.

Electricity capacity reserve margins in most areas of the nation have declined sharply and, on a national average basis, have declined to 8 percent from 21 percent since 1990. Prices have risen and overall electric system reliability has fallen during this period.

Natural gas prices reached all-time highs in December of more than $9 per thousand cubic feet, reflecting the increasing tightness of supply relative to demand. Many homeowners and businesses will see 100-percent increases in their bills this winter.

The reasons for the deteriorating energy supply situation are varied and longstanding. Most are related to governmental policies and overly restrictive environmental and other regulations that have discouraged developing increased energy supplies and transportation infrastructure or have created an uncertain or uneconomic investment climate.

First, in the case of oil and gas drilling, many state and federal lands that have potentially large oil and gas reserves have been excluded from development.

Second, while state and federal regulators during the past five years have been formulating and implementing various schemes that seek greater competition for

27806

utilities, the attendant uncertainty in the investment climate for new power plants by both utility and non-utility investors has resulted in very few new plants being built.

Third, because of the opposition by environmentalists and local groups to new electric transmission lines, and the fact that there are no siting laws preventing unreasonable local delays, new interstate electric transmission lines have been virtually impossible to site and build.

Finally, it has been impossible to build any new plants other than natural gas power plants, which are becoming more expensive to operate because of rising natural gas fuel prices. Contributing to this situation has been a lack of federal action on nuclear waste legislation, onerous environmental regulation of coal power plants despite emissions reductions of 30 percent since 1970 and opposition to new hydroelectric plants.

To meet the growing demand for electric power, 20,000 to 25,000 megawatts of new generating capacity must be added each year for the next 10 to 15 years (current U.S. capacity equals around 700,000 megawatts).

To avoid a major shortfall in U.S. electric supply, several urgent measures are required:

Regulators have been focusing on electric industry restructuring including some form of regional transmission organizations (RTOs) that would operate transmission lines as a common carrier. RTOs would be inherently less efficient than investor-controlled transmission and would have little incentive to provide new transmission capacity. The same approach that has worked for natural gas transmission, that is, to require owners to provide equal and open access under regulated tariffs providing an adequate rate of return, should be adopted.

Federal policy discourages new electric transmission projects by setting artificially low rates of return for new investment. Either the Federal Energy Regulatory Commission (FERC) must set realistic rates, or it must let financial markets determine how investors assess the risk of building additional lines.

Congress should give the FERC the power of eminent domain to expedite construction of new interstate electric transmission lines, similar to its existing authority for natural gas pipelines.

Tax incentives should be used to encourage investment in clean coal technologies, and the Environmental Protection Agency should be prevented from closing existing coal- fired electric plants, which provide 55 percent of all U.S. electricity, or preventing the construction of new ones.

Nuclear waste disposal legislation should be enacted and signed into law to resolve this major uncertainty affecting nuclear power.

With respect to enhancing domestic oil and gas supplies:

Federal and state lands with large potential reserves of oil and gas should be opened to drilling under strict environmental guidelines.

Federal royalties should be slashed to encourage drilling.

New oil and gas infrastructure, including pipeline and refineries, should be approved expeditiously.

If the country is to return to a situation of adequate and secure domestic energy, a national energy policy needs to be implemented that puts enhancing gas, oil and electric supplies back as the nation's No. 1 energy priority.

William T. McCormick Jr. is
chairman and chief executive of CMS Energy Corp. and chairman of its principal subsidiary, Consumers Energy, Michigan's largest utility and America's fourth largest
combination gas and electric utility. Write letters to 615 W. Lafayette, Detroit, Mich. 48226, or fax them
to (313) 222-6417 or send e-mail
to letters@detnews.com.

American Association of Petroleum Geologists
An International Geological Organization

MARLAN W. DOWNEY
President

2001-007403 Mar 19 p 12:05

March 9, 2001

Mr. Spencer Abraham
Energy Secretary
United States Department of Energy
1000 Independence Avenue, S.W.
Building FORS, Mail Stop 7E-079
Washington, DC 20585

Dear Mr. Abraham:

I invite you to attend the American Association of Petroleum Geologists (AAPG) President's Conference on National Issues: a Summit on U.S. Energy Policy. This is a one-day meeting in Washington, D.C, that is by invitation only. It has been planned and scheduled because of the current efforts to define such a policy occurring within the Administration and on Capitol Hill. The AAPG believes now is the time scientific input can genuinely impact energy policy discussion. To that end the AAPG, in cooperation with other scientific and professional societies, representing nearly 100,000 US professional energy scientists and other resource specialists, has scheduled this meeting on Monday, April 23rd at the Army & Navy Club[1] on Farragut Square.

The summit will address the rationale, necessary elements, and the structure for an energy strategy that can bring about a national energy policy that truly meets the nation's needs. The key objective of this summit is to provide a good scientific background for decision-makers, policy-makers, and those who support those individuals for their future deliberations and discussions on energy. I know attendees will not be disappointed. Thank you!

Cordially,

Marlan W. Downey

PS> (1) A stamped RSVP card is enclosed. Please return it as soon as your schedule permits, but no later than April 15th.
(2) Program updates at: http://www.wvgs.wvnet.edu/www/energy/index.html)

[1]The Army and Navy Club is at 901 17th Street, NW, on the corner of 17th and I Street. It is convenient to both the Blue/Orange and Red Lines of the Metro.

Mail: P.O. Box 979, Tulsa OK 74101-0979 USA • Street: 1444 South Boulder, Tulsa OK 74119 USA
Phone: 800-364-2274 (U.S.A./Canada) • 918-584-2555 (Other Locations)

27809

THE INDIANAPOLIS STAR
State Edition
"Where the Spirit of the Lord is, there is Liberty" II Cor. 3:17
MONDAY, JANUARY 22, 2001
A CONSECO NEWSPAPER
WWW.STARNEWS.COM
Mostly sunny
Low 17, high 34.
Page B6

DIALOGUE AND LETTERS

Toward adequate energy and a clean environment

LETTER SPOTLIGHT

James E. Rogers

America faces an impending "perfect storm" in energy — both electricity and natural gas. Neither the Clinton administration nor Congress heeded the warnings over the last eight years. Left unchecked, the coming storm could dwarf the energy crisis of the 1970s.

The new Bush administration and Congress have the opportunity to steer clear of the coming storm or significantly reduce its potential damage. But they must demonstrate leadership by rolling up their sleeves and going to work to enact simultaneously both comprehensive energy and environmental legislation. There cannot be one without the other.

A bipartisan solution is possible now because historically neither Democrats nor Republicans have laid claim to energy and environmental issues. The fault line on these issues has been between regions of the country and between producing and consuming constituents. The only time in the past that we've been able to build a consensus on these important issues is when a crisis is looming.

The cost of no rational energy and environmental policy is now obvious. Natural gas prices are skyrocketing. Inadequate supply due to hostility toward domestic production now cruelly coincides with the Environmental Protection Agency's promotion of gas for all of the nation's combustion needs, from home furnaces to industrial processing to new electric power plants.

Indeed, at least some versions of the Clinton administration's Kyoto implementation schemes advocate a massive substitution of the nation's coal generation capacity with natural gas.

The electricity industry is not any better. Blackouts and near misses driven by inadequate supplies, regional transmission constraints and spiking wholesale prices have been making nationwide headlines.

At the retail level, we have a patchwork of regulatory structures, with about half of the states with deregulation plans in place and the other half not even considering deregulating electricity. We have a Balkanized wholesale electricity market with price volatility and transmission constraints.

To understand the results of not squaring energy and environmental policy simultaneously, we have only to look to California, which is experiencing the first wind damage of the coming storm. Californians needed power but they were unwilling to approve the construction of new plants or to pursue aggressively conservation strategies that consumers would adopt. Due to environmental restrictions, no new power plants with significant capacity have been built in California in the past decade.

They wanted to have their cake and eat it too: abundant supplies of low-cost electricity but no new plants. They now know what happens when a booming economy and increasing population runs smack into a decade-long freeze on new generation and transmission facilities. It's not deregulation (although their version is flawed) that is at fault but simply an imbalance of supply and demand that has created the current problem.

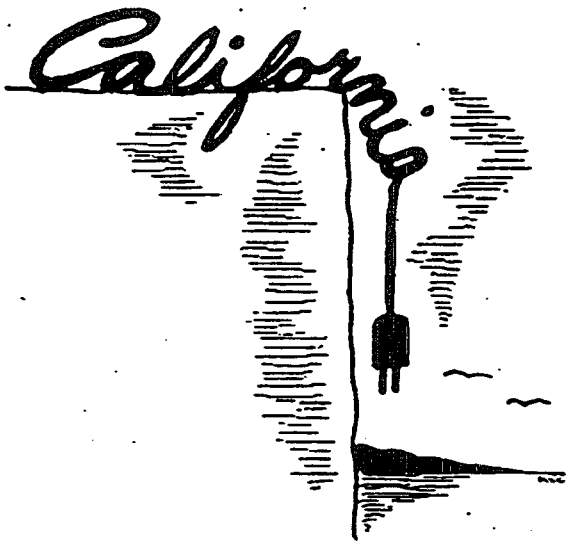
The way forward requires a coordinated national energy and environmental plan that promotes investment in new technologies: new oil and gas production; building of new state-of-the-art coal and gas plants and de-bottlenecking of electric and gas transmission.

A balanced policy also must include comprehensive environmental requirements for older coal-fired power plants and emission guidelines for the life of new plants. It must include incentives for renewable energy and energy conservation.

It has been almost 23 years since the passage of major energy legislation, which came on the heels of the Arab oil embargoes of the 1970s and more than two decades of failed federal price regulation of natural gas. It is critical that we avoid polarizing rhetoric and face up to the tough trade-off between the economy, environment and energy demands.

Clarity at the national level is desperately needed, and the new administration and Congress have the opportunity to harmonize our twin goals of a clean environment and adequate energy to fuel our economy. Failure to do so guarantees that the coming storm will continue to strengthen and hit full strength.

Margaret Scott Illustration



Rogers is president and CEO of Cinergy Corp. in Indiana.

27810

Department of Energy
Washington, DC 20585

February 27, 2001

2001-005019

Mr. William Anawaty
President
ANARI, Inc.
The Carriage House
1 Saint Matthew's Court, N.W.
Washington, D.C. 20036

Dear Mr. Anawaty:

We have received your correspondence dated February 22, 2001, requesting a meeting with Secretary Spencer Abraham on May 3 or 4, 2001, in Washington, D.C., to discuss energy policy.

We have forwarded your request to the Secretary's Office of Scheduling and Advance. A staff member from that office will notify you regarding the status of your request.

If you have any questions, please call Ms. Robyne Johnston at (202) 586-5534.

Sincerely,

James N. Solit
Director, Executive Secretariat

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2001-004430

Department of Energy
Washington, DC 20585

March 6, 2001

Mr. Stanley C. Horton
Chairman
Interstate Natural Gas Association of America
10 G Street, N.E.
Suite 700
Washington, D.C. 20002

Dear Mr. Horton:

Thank you for your recent letter to Secretary Abraham, which commended the efforts of the Administration to develop a cohesive energy policy and more specifically, our proposals for cleaner coal-fired power generation.

As you know, one of President Bush's first acts was creating a National Energy Policy Development Group, headed by Vice President Cheney, to help the private sector and government at all levels, promote dependable, affordable, and environmentally sound production and distribution of energy for the future. This group includes the Secretary of Energy, as well as the Secretaries of the Treasury, Interior, Agriculture and Commerce Departments, the heads of the Federal Emergency Management Agency, the Environmental Protection Agency, the President's Deputy Chief of Staff for Policy, and the Assistants to the President for Economic Policy and Intergovernmental Affairs.

The group will consider the ideas and recommendations of consumers, businesses, and independent experts on how best to address the broad range of energy issues now facing the Nation, including rapidly rising costs for natural gas, electricity supply and price problems in the West and the increasing dependence of the United States on imported oil. Your specific suggestions will be made known to participants in this process.

Thank you for writing.

Sincerely,

Margot Anderson
Acting Director
Office of Policy

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2001-003874

Department of Energy
Washington, DC 20585

March 6, 2001

Mr. James E. Davis, P.E.
American Society of Civil Engineers
1015 15th Street, NW, Suite 600
Washington, DC 20005-2606

Dear Mr. Davis:

Thank you for your recent letter to Mr. Andrew Lundquist, which expressed strong support of the American Society of Civil Engineers for the Administration's effort to develop a comprehensive national energy policy, and offered copies of pertinent energy policy statements by ASCE.

As you know, one of President Bush's first acts was creating a National Energy Policy Development Group, headed by Vice President Cheney, to help the private sector and government at all levels, promote dependable, affordable, and environmentally sound production and distribution of energy for the future. This group includes the Secretary of Energy, as well as the Secretaries of the Treasury, Interior, Agriculture and Commerce Departments, the heads of the Federal Emergency Management Agency, the Environmental Protection Agency, the President's Deputy Chief of Staff for Policy, and the Assistants to the President for Economic Policy and Intergovernmental Affairs.

The group will consider the ideas and recommendations of consumers, businesses, and independent experts on how best to address the broad range of energy issues now facing the Nation, including rapidly rising costs for natural gas, electricity supply and price problems in the West and the increasing dependence of the United States on imported oil. The specific recommendations of ASCE have been made known to participants in this process.

Thank you for writing.

Sincerely,

Margot Anderson

Margot Anderson
Acting Director
Office of Policy

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27813

2001-002879

Department of Energy
Washington, DC 20585

March 7, 2001

G. Warfield Hobbs
President
American Association of Petroleum Geologists
Ammonite Resources
181 Mariomi Resources
New Canaan, CT 06840

Dear Mr. Hobbs:

Thank you for your recent letter offering your recommendations on how best to address some of the Nation's current energy problems, and indicating your interest in serving on the Administration's energy policy task force.

As you know, one of the first acts of President Bush was to create a National Energy Policy Development Group, headed by Vice President Cheney, to help the private sector, and government at all levels, promote dependable, affordable, and environmentally sound production and distribution of energy for the future. This group includes the Secretary of Energy, as well as the Secretaries of the Treasury, Interior, Agriculture and Commerce Departments, the Heads of the Federal Emergency Management Agency, the Environmental Protection Agency, the President's Deputy Chief of Staff for Policy, and the Assistants to the President for Economic Policy and Intergovernmental Affairs.

The group will consider how best to address the broad range of energy issues now facing the Nation, including rapidly rising costs for natural gas, electricity supply and price problems in the West, the increasing dependence of the United States on imported oil, and will report back to the President in the coming months. Your specific suggestions will be made known to participants in this process.

Thank you for writing.

Sincerely,

Margot Anderson

Margot Anderson
Acting Director
Office of Policy

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