

## MEETING NOTICE

### **Governor's Task Force on Global Warming Industry Work Group**

**Date: Thursday August 30, 2007, 9:00 a.m. to 12:00 noon**

**Location: Wisconsin Energy Conservation Corporation  
Training Room AB, 431 Charmany Dr., Madison**

### AGENDA

- 1) Welcome and review of agenda
- 2) Open Meetings issues and questions – Caryl and Paul
- 3) SWOT Exercise – Scott Johnson
- 4) Review suggested Policy Development Process – Caryl/Paul
- 5) Brainstorm policy options
- 6) Preliminary evaluation & winnowing of policy options
- 7) Preview next steps – Caryl and Paul

End by 11:45 for short break before Co-meeting with Conservation and Energy Efficiency Work Group

#### **Note to members:**

Please let us know if you will be able to stay for the 12:00PM - 1:00PM Co-meeting with the CEE WG as soon as possible so that we can get an accurate count for lunch.

**Materials for the meeting:** The Policy Development Process and preliminary policy options were distributed at our August 17<sup>th</sup> meeting and have also been posted to the Industry Work Group website. The address is:

[http://dnr.wi.gov/environmentprotect/gtfgw/WG\\_i.html](http://dnr.wi.gov/environmentprotect/gtfgw/WG_i.html)

**This meeting is open to the public.**

**For more information, or if you need special accommodations to attend this meeting, contact Nick Sayen, DNR at (608) 267-2466.**

**Governor's Task Force on Global Warming**  
**Co-meeting: Industry & Conservation and Energy Efficiency Work Group**  
**Date: Thursday August 30, 2007, 12:00 noon to 1:00 p.m.**  
**Location: Wisconsin Energy Conservation Corporation**  
**Training Room AB, 431 Charmany Dr., Madison**

**AGENDA**

- 1) Welcome and review of agenda
- 2) Presentation of Focus On Energy Industrial Programs – John Nicol, SAIC, approx. 10 minutes
- 3) Presentation of Industrial Customer Energy Efficiency: opportunities and obstacles – Tom Scharff, Stora Enso, approx. 10 minutes
- 4) Group discussion

**This meeting is open to the public.**

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## **DRAFT MEMO**

To: Industry Workgroup Members

From: Co-Chairs Linzmeyer and Terrell

Date: August 30, 2007

Re: General Process

As a member of the Industry Work Group, we have an exciting opportunity to suggest policy options to the Task Force on Global Warming that can have a real impact on global warming in Wisconsin.

We are on a very tight time line. Because of our later start date, we have been granted some leeway from the September 30 due date for Work Group Reports to the full Task Force, but should get our report to the Task Force by mid-October. Please also note that the process may need to be modified at the discretion of the Co-Chairs in order to timely meet our expectations.

Our process generally will work as follows:

- **Step 1: Develop policy options.**

World Resources Institute has provided us with a list of policy options which have been considered in other states doing similar global warming work and evaluations. However, one of our first tasks will be to evaluate this list, and identify what works for our work group. We started to do this at our August 17<sup>th</sup> meeting. We should also plan to add policy options to this list, especially those that may be Wisconsin-specific. We may craft very brief write-ups on each policy option to get us started in the evaluation process. Additionally, we may need to identify informational and resource needs to help us with our task.

- **Step 2: Preliminary evaluation and winnowing.**

This is the step where the bulk of our work will be done as a work group. After we feel satisfied that we have an encompassing list of policy options connected with Industry, we need to prioritize our list to narrow it down. For example, we may initially have a list of 30 policy options, but we should ideally be prepared to send fewer than 10 policy options to the overall Task Force as our final recommendations. We will also need to develop a set of evaluation criteria. In order to responsibly winnow our list down to the best policies, we should be prepared for multiple attempts and spirited debate while shortening our list.

- **Step 3: Further evaluation and winnowing.**

After we've reduced our list to include what we think are our most promising policies, we will be asking each of you to participate in doing brief written analyses of the policies, using a specific template which we will provide to you. We will review the drafts as a work group and continue

to evaluate, revise and rework our policy recommendations to prepare to forward our final lists and supporting analyses to the Task Force. Policy analyses will include elements such as implementation cost, GHG savings, economic impact on Wisconsin's economy, and more.

- **Step 4: Finalize workgroup policy package to send to Task Force.**

This step will encompass us largely wrapping up our work together and arriving at a set of policy recommendations to forward to the full Task Force, using the standardized template format. Innovative, controversial policy options are often where the largest GHG savings may occur, if implemented. We hope to address controversial ideas and will strive to reach consensus on them inside our group. While we will ultimately work for consensus for all policy options that we forward to the Task Force, we may pass policy analyses to the overall Task Force that do have a majority – but not full -- support of our group. Minority views will be noted. It is recognized that support for specific policies may sometimes be contingent on the overall package developed.

- **Step 5: Workgroup product presented to Task Force; Task Force develops complete package. The co-chairs will present the workgroup policy recommendations to the full Task Force.**

The Task Force will construct a “policy package” which will include not only our workgroup policy recommendations, but recommendations from other work groups. The Task Force will move on to model a total policy package, review results and give final recommendations to the Governor by the end of the year. However, before our targeted end date of December 31<sup>st</sup>, the Task Force may have more questions on our specific policies. If so, we should be prepared to reconvene, find the requested information and support this overall final effort of the Task Force.

**Special note:** Our work is subject to Wisconsin's Open Meeting and Public Records Laws. All inquiries, correspondence, etc., should be directed to our workgroup's staff assistant, Nick Sayen at 608-267-2466 or [Nick.Sayen@wisconsin.gov](mailto:Nick.Sayen@wisconsin.gov) and Caroline Garber at 608-264-9218 or [Caroline.Garber@wisconsin.gov](mailto:Caroline.Garber@wisconsin.gov)

Also note that further information regarding the Governor's Global Warming Task Force to date can be found at <http://dnr.wi.gov/environmentprotect/gtfgw/>.

## DRAFT Industry Workgroup Process

STRATEGIC STEPS	TIME LINE
<p><b>STEP 1</b></p> <ul style="list-style-type: none"> <li>· Overview of process, expectations, time line, ground rules</li> <li>· Identify informational needs</li> <li>· Brainstorm list of policy options</li> <li>· Write brief descriptions</li> </ul>	<p>2 meetings:</p> <ul style="list-style-type: none"> <li>▪ August 17</li> <li>▪ August 30</li> </ul>
↓	
<p><b>STEP 2</b></p> <ul style="list-style-type: none"> <li>· Establish evaluation criteria</li> <li>· Winnow down to reasonable number of policy options for further analysis</li> <li>· Assign team(s) to do two page write-up (using set template)</li> <li>· Set deadline for submittal of drafts</li> <li>· Identify technical help needed</li> </ul>	<p>1 to 2 meetings</p> <ul style="list-style-type: none"> <li>▪ August 30</li> <li>▪ Week of September 10</li> </ul>
↓	
<p><b>STEP 3</b></p> <ul style="list-style-type: none"> <li>· Review draft policies submitted</li> <li>· Sift and winnow further</li> <li>· Redraft as necessary</li> </ul>	<p>1 meeting</p> <ul style="list-style-type: none"> <li>▪ Week of September 24</li> </ul>
↓	
<p><b>STEP 4</b></p> <ul style="list-style-type: none"> <li>· Continue review of draft policies</li> <li>· Strive for consensus (or near consensus) on final working group recommendations to forward to task force</li> </ul>	<p>1 meeting</p> <ul style="list-style-type: none"> <li>▪ Week of October 1</li> </ul>
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<p><b>STEP 5</b></p> <ul style="list-style-type: none"> <li>· Co-chairs compile working group's recommendations and forward to full task force</li> </ul>	<p>No later than mid-October</p>

GHG REDUCTION POLICY OPTIONS									
State	AZ	NM	MT	NC	CA	ME	CT	WI Ind WG	
Implement Enhanced Appliance Efficiency Standards; including new boiler efficiency standards	x	x		x	x			x	
Adopt Building Standards/Codes/Design Incentives for Energy Efficiency and Smart Growth	x	x	x		x				
More building codes for gov and non-gov		x		x	x				
Increase Water Use Efficiency and Promote Energy Efficiency and Renewable Energy Production from Water and Wastewater Management	x				x				
Industrial Energy Audits and Recommended Measure Implementation			x						
Efficient Use of Oil and Gas: boilers, upgrade to steam system						x			
Efficient Use of Electricity: pumps, motors, lighting, cooling						x			
Improve fuel efficiency of non-road engines: Establish a minimum standard, tax or other financial incentives to promote use of higher efficiency engines	WI							x	
Energy efficiency incentives, assistance and/or standards for commercial/industrial generators and boilers	IL							x	
Reduce methane leaks in oil and gas systems	IL				x	x			
Energy Management Training						x			
Encourage Distributed Generation of Renewable Energy and Combined Heat and Power	x	x	x			x			
Promote Low-Global-Warming-Potential Refrigerants in Commercial Operations	x								
Distributed Renewable and Clean Fossil Fuel Power Generation				x					
Use of Alternative Gases (Non-Energy Emissions, Indus. Process Gases)		x							
Green Power Purchasing		x		x					
Require biodiesel for commercial and industrial generators. (Determination of potential for development and increased reliance on biofuels (biodiesel) for generation.)	WI-IL								

Improve fuel efficiency of non-road engines: promote use of biofuels or other low GHG emitting fuels	WI								
Encourage or require reductions in emissions of high GWP gases (N2O, HFCs, PFCs, SF6) (Identification and evaluation of potential measures to reduce direct emissions of GHG emissions from production processes, including voluntary and regulatory measures. Regulatory measures could include market-based schemes (such as cap and trade and traditional regulatory measures	WI-IL								
<b>Related to above</b> *Substitution of High GWP Gases--Substitute high global warming potential (GWP) gases with appropriate substitutes depending on application (e.g. CO2, amonia).							x		
Identification and evaluation of potential measures to achieve reductions from existing on-site power generation.	WI								
Residential, Commercial, and Industrial Energy and Emissions Technical Assistance and Recommended Measure Implementation					x				
Increase Recycling and Solid Waste Management and Reduction		x	x		x	x			
Improve fuel efficiency of non-road engines: promote alternative landscaping and maintenance practices (for example, promoting native planting, leaving grass and leaf clippings in place)	WI								
Explore opportunities for recognition for early actions. Identify and evaluate state policies that would create an innovative and robust way to ensure that Wisconsin businesses get credit for their early actions to reduce GHG emissions	WI								
Publicize and leverage major corporate sustainability initiatives and build business leadership support for Task Force goals	WI								
New climate-friendly products and services	WI								
Technology development	WI	x	x	x	x	x	x		
Decrease emissions from cement factories						x			
Optimization of Compressed air systems							x		
EE Process improvements							x		
Participate in voluntary industry-government partnerships							x		
Process Changes/Optimization							x		
Capture, Recovery and Recycling of process gases							x		
New Equipment							x		



## Policy Categories for Industry Group

1. Efficient Fuel/Electricity use
  - a. Buildings
    - i. Retrofits
    - ii. Commissioning
    - iii. Energy efficiency Building codes
    - iv. Building standards that exceed codes – incentives?
    - v. Green power purchasing
    - vi. Recycling/solid waste management
    - vii. Green procurement
    - viii. Low emission Landscaping practices
  - b. Compressed Air
  - c. Process Heat
  - d. Electric Motors
    - i. Incentives for replacement
    - ii. Efficiency standards
  - e. Water use efficiency
    - i. Low flow appliances
    - ii. Onsite water recycling
2. Efficient Onsite Generation
  - a. Low GHG fuels
  - b. Combined Heat & Power
  - c. Boiler efficiency
    - i. Efficiency standards
    - ii. Replacement assistance?
  - d. Carbon capture & Sequestration
  - e. Reduce leaks in oil and gas systems
3. Process Emissions (industry specific)
  - a. Capture, recovery, recycling
  - b. Lower GHG alternatives
4. Process Efficiency (plant specific)
  - a. LEAN practices
  - b. Workforce development
  - c. “industrial ecology” – integration of waste streams & supply chains
5. New Markets
  - a. Retooling
    - i. Renewable components (solar hot water, PV, wind, biogas, etc.)
    - ii. Financial incentives (grants, loans, tax credits, IDBs)
  - b. Pilot projects
  - c. Govt. Purchasing
6. Incentive/feedback loops for conservation and efficiency

- a. Conservation rate structure
- b. Smart meters
- c. Awards program/recognition
- d. Tools for quantifying and monitoring emissions
- e. Marketing/Product labeling – “Green Wisconsin Product” “GHG free” etc.
- f. Energy management training

### CY 2005 CO2 Emissions Reported to the Air Emissions Inventory

SIC Total	CO2 Tons_2005	Activity	% of Total		
49 Total	51,624,386	Electric, Gas & Sanitary Services*	83.85%		
26 Total	6,884,600	Paper & Allied Product Manufacturers	11.18%		
14 Total	865,580	Mining & Quarrying, Non Met. Mineral	1.41%		
32 Total	819,414	Stone, Clay, Glass & Clay Manufacturers	1.33%		
35 Total	338,452	Industrial & Commercial Machinery Mfrs.	0.55%		
20 Total	257,146	Food & Kindred Products Manufacturers	0.42%		
28 Total	251,400	Chemicals & Allied Products Manufacturers	0.41%		
33 Total	154,647	Primary Metal Industries Manufacturers	0.25%		
36 Total	146,729	Electronic & Electrical Equipment Mfrs.	< 0.25%		
82 Total	68,354	Schools & Educational Services	< 0.25%		
80 Total	39,870	Doctors/Hospitals/Nursing Homes	< 0.25%		
24 Total	39,410	Lumber & Wood Product Manufacturers	< 0.25%		
34 Total	31,326	Fabricated Metal Products Manufacturers	< 0.25%		
29 Total	11,390	Petroleum & Related Industry Manufacturers	< 0.25%		
92 Total	6,055	Justice, Public Order & Safety	< 0.25%		
27 Total	4,663	Printing & Publishing	< 0.25%		
30 Total	4,460	Rubber & Misc. Plastics Manufacturers	< 0.25%		
97 Total	2,619	National Security & International Affairs	< 0.25%		
50 Total	2,578	Wholesale, Durable Goods	< 0.25%		
37 Total	2,361	Transportation Equipment Manufacturers	< 0.25%		
87 Total	2,184	Engineering, Accounting & Management Svcs	< 0.25%		
51 Total	2,001	Wholesale, Non-Durable Goods	< 0.25%		
16 Total	1,957	Heavy Construction	< 0.25%		
72 Total	1,944	Personal Services	< 0.25%		
42 Total	1,237	Trucking & Warehouse	< 0.25%		
25 Total	1,236	Furniture & Fixture Manufacturers	< 0.25%		
38 Total	466	Measuring & Analyzing Equipment Mfrs.	< 0.25%		
64 Total	134	Insurance, Agents & Brokers Services	< 0.25%		
63 Total	16	Insurance Carriers	< 0.25%		
<b>Total</b>	<b>61,566,614</b>	<b>Stationary Sources Reporting to AEMS</b>	<b>100.00%</b>		
<b>Total</b>	<b>33,753,900</b>	<b>mobile source sector</b>			
<b>Grand Tot</b>	<b>95,320,514</b>	<b>Point and Mobile</b>			
<b>Mobile Source emissions for 2005 based on petroleum based fuels</b>					
year	gas (motor fuel)	diesel	jet fuel	rail	<b>Total</b>
2005#	2,487	725	100	35	3347
tons CO2	24,123,900	8120000	1055000	455000	<b>33753900</b>
# All values in millions of gallons					
<a href="http://www.eia.doe.gov/oiaf/1605/factors.html">http://www.eia.doe.gov/oiaf/1605/factors.html</a>					
Data from AEMS (Point) and Wi Energy Statistics (Mobile). Summarized by E. Jepsen					
CO2 data only - does not include methane, nitrous oxide, SF6, HFC, PFC).					
*SIC 49 contains WTPs (1,744) and Landfills (54,755) for a total 56,499 T/CO2					

GHG REDUCTION POLICY OPTIONS	
1	Implement Enhanced Appliance Efficiency Standards; including new boiler efficiency standards
2	Adopt Building Standards/Codes/Design Incentives for Energy Efficiency and Smart Growth
3	More building codes for gov and non-gov
4	Increase Water Use Efficiency and Promote Energy Efficiency and Renewable Energy Production from Water and Wastewater Management
5	Industrial Energy Audits and Recommended Measure Implementation
6	Efficient Use of Oil and Gas: boilers, upgrade to steam system
7	Efficient Use of Electricity: pumps, motors, lighting, cooling
8	Improve fuel efficiency of non-road engines: Establish a minimum standard, tax or other financial incentives to promote use of higher efficiency engines
9	Energy efficiency incentives, assistance and/or standards for commercial/industrial generators and boilers
10	Reduce methane leaks in oil and gas systems
11	Energy Management Training
12	Encourage Distributed Generation of Renewable Energy and Combined Heat and Power
13	Promote Low-Global-Warming-Potential Refrigerants in Commercial Operations
14	Distributed Renewable and Clean Fossil Fuel Power Generation
15	Use of Alternative Gases (Non-Energy Emissions, Indus. Process Gases)
16	Green Power Purchasing
17	Require biodiesel for commercial and industrial generators. (Determination of potential for development and increased reliance on biofuels (biodiesel) for generation.)
18	Improve fuel efficiency of non-road engines: promote use of biofuels or other low GHG emitting fuels
19	Encourage or require reductions in emissions of high GWP gases (N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> ) ( Identification and evaluation of potential measures to reduce direct emissions of GHG emissions from production processes, including voluntary and regulatory measures. Regulatory measures could include market-based schemes (such as cap and trade and traditional regulatory measures
20	Related to above *Substitution of High GWP Gases--Substitute high global warming potential (GWP) gases with appropriate substitutes depending on application (e.g. CO <sub>2</sub> , ammonia).
21	Identification and evaluation of potential measures to achieve reductions from existing on-site power generation.
22	Residential, Commercial, and Industrial Energy and Emissions Technical Assistance and Recommended Measure Implementation
23	Increase Recycling and Solid Waste Management and Reduction
24	Improve fuel efficiency of non-road engines: promote alternative landscaping and maintenance practices (for example, promoting native planting, leaving grass and leaf clippings in place)
25	Explore opportunities for recognition for early actions. Identify and evaluate state policies that would create an innovative and robust way to ensure that Wisconsin businesses get credit for their early actions to reduce GHG emissions
26	Publicize and leverage major corporate sustainability initiatives and build business leadership support for Task Force goals
27	New climate-friendly products and services
28	Technology development

NOTE: #'s 1-48 were provided by WRI and Work Group Members  
 #'s 49-85 were developed during the brainstorming session at the 8-30-07 Industry Work Group Meeting  
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29	Decrease emissions from cement factories
30	Optimization of Compressed air systems
31	EE Process improvements
32	Participate in voluntary industry-government partnerships
33	Process Changes/Optimization
34	Capture, Recovery and Recycling of process gases
35	New Equipment
36	Industrial ecology/by-product synergy--programs to link the by-products from one industry with use as the feedstock for other industries
37	Negotiated Agreements--to promote GHG reductions in particular sectors, a state government may enter into direct voluntary or negotiated agreements with industries or industrial sectors. Legislation requires (need to develop metrics).
38	Energy Efficiency Resource Standard -- consumers gain E2 credits to sell to utilities
39	R&D funding/tax credits for new technology development
40	Raise R&D tax incentive for small engines from 5% to 15%
41	Mechanisms to distribute knowledge on GHG reduction techniques to small businesses
42	Tradable GHG tax credits
43	Organize supply chains to reduce transportation costs & emissions
44	Midwest regional approach to cap and trade
45	Incorporate "Green" with "Lean" -- don't start with GHG reductions as goal; start with competitiveness, savings and efficiency
46	Invest in small entrepreneurs who are trying new energy saving technology
47	Fund Pilot Projects for new technologies
48	Reduce industrial water consumption
<b>BRAINSTORMING SESSION RESULTS</b>	
49	Expand market for Focus On Energy, redo criteria and protect funding
50	Building efficiency: retrofits, heating, electricity
51	Sector based goals
52	Energy auditing and budgeting by sector
53	Government purchasing preference
54	Greater flexibility in government contracting
55	Private and government programs to disseminate low GHG technologies
56	Tech. schools / UW Extension / UW System programs for low GHG emissions and workforce development
57	GHG reduction given higher priority in Green Tier
58	Green Tier - change / evolve to standing council for advising and education
59	"Energy Advantage" brand program (akin to Energy Star)
60	investment in renewable technology
61	Expand WMEP to include GHG emissions

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62	General incentives for conservation & efficiency & infrastructure
63	Reduce emissions from on-site generation
64	Quantify emissions by sector
65	Public funding of technology demonstration projects
66	Tools to quantify emissions (to business)
67	On-site generation evaluation and economic study
68	Utilize / emphasize existing programs
69	What are existing incentives / resources for GHG reduction?
70	GHG portion of supply-chain efficiency
71	Macro-measure of state industry emissions - direct and indirect
72	Emissions per quality job growth
73	Provide feedback to industry on emissions and recognize leaders (smart meters) - immediate, medium & long term -
74	Technologies to "down-cycle" to small business
75	Developing 'down-cycled technology' #74 when not available, e.g. - real-time monitoring
76	Efficient water usage reduces gas and electricity and GHG
77	Private purchasing preferences
78	Recovery and re-use of energy - BTUs out-of-stack
79	Government regulations and policies governing BTUs out-of-stack #78
80	PART A - encourage WI-IND to invest in technology / application / best practices out-of-state
80	PART B - encourage WI-IND to invest in GHG technology and best management practices
81	invest in R&D
82	link technology developers to corporate partner
83	#81 & #82 find state funding sources W.I.N. focuses on GHG companies
84	WI explore / lead midwest approach to reduce GHG and preserve WI - strategic advantages
85	create Gaylord Nelson Award - similar to Forward Award

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Industry Work Group GHG REDUCTION POLICY OPTIONS & BRAINSTORMING SESSION RESULTS		
Strategy #	Number	
process	21	Identification and evaluation of potential measures to achieve reductions from existing on-site power generation.
process	22	Residential, Commercial, and Industrial Energy and Emissions Technical Assistance and Recommended Measure Implementation
state wide organize	32	Participate in voluntary industry-government partnerships
state wide organize	33	Process Changes/Optimization
<b>Strategic Bucket #1 - Drive energy efficiency</b>		
1	2	Adopt Building Standards/Codes/Design Incentives for Energy Efficiency and Smart Growth
1	3	More building codes for gov and non-gov
1	4	Increase Water Use Efficiency and Promote Energy Efficiency and Renewable Energy Production from Water and Wastewater Management
1	5	Industrial Energy Audits and Recommended Measure Implementation
1	6	Efficient Use of Oil and Gas: boilers, upgrade to steam system
1	7	Efficient Use of Electricity: pumps, motors, lighting, cooling
1	8	Improve fuel efficiency of non-road engines: Establish a minimum standard, tax or other financial incentives to promote use of higher efficiency engines
1	9	Energy efficiency incentives, assistance and/or standards for commercial/industrial generators and boilers
1	10	Reduce methane leaks in oil and gas systems
1	13	Promote Low-Global-Warming-Potential Refrigerants in Commercial Operations
1	14	Distributed Renewable and Clean Fossil Fuel Power Generation
1	18	Improve fuel efficiency of non-road engines: promote use of biofuels or other low GHG emitting fuels
1	19	Encourage or require reductions in emissions of high GWP gases (N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> ) ( <b>Identification and evaluation of potential measures to reduce direct emissions of GHG emissions from production processes, including voluntary and regulatory measures. Regulatory measures could include market-based schemes (such as cap and trade and traditional regulatory measures</b> )
1	24	Improve fuel efficiency of non-road engines: promote alternative landscaping and maintenance practices (for example, promoting native planting, leaving grass and leaf clippings in place)
1	25	Explore opportunities for recognition for early actions. Identify and evaluate state policies that would create an innovative and robust way to ensure that Wisconsin businesses get credit for their early actions to reduce GHG emissions

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1	26	Publicize and leverage major corporate sustainability initiatives and build business leadership support for Task Force goals
1	29	Decrease emissions from cement factories
1	30	Optimization of Compressed air systems
1	31	EE Process improvements
1	35	New Equipment
1	48	Reduce industrial water consumption
1	49	Expand market for Focus On Energy, redo criteria and protect funding
1	50	Building efficiency: retrofits, heating, electricity
1	52	Energy auditing and budgeting by sector
1	53	Government purchasing preference
1	54	Greater flexibility in government contracting
1	56	Tech. schools / UW Extension / UW System programs for low GHG emissions and workforce development
1	63	Reduce emissions from on-site generation
1	64	Quantify emissions by sector
1	70	GHG portion of supply-chain efficiency
1	71	Macro-measure of state industry emissions - direct and indirect
1	72	Emissions per quality job growth
1	75	Developing 'down-cycled technology' #74 when not available, e.g. - real-time monitoring
1	76	Efficient water usage reduces gas and electricity and GHG
1	77	Private purchasing preferences
1	83	#81 & #82 find state funding sources W.I.N. focuses on GHG companies
1	84	WI explore / lead midwest approach to reduce GHG and preserve WI - strategic advantages
1	85	create Gaylord Nelson Award - similar to Forward Award
<b>Strategic Bucket #2 - Invest in developing Wisconsin's existing and new energy technologies</b>		
2	12	Encourage Distributed Generation of Renewable Energy and Combined Heat and Power
2	15	Use of Alternative Gases (Non-Energy Emissions, Indus. Process Gases)
2	16	Green Power Purchasing
2	17	Require biodiesel for commercial and industrial generators. (Determination of potential for development and increased reliance on biofuels (biodiesel) for generation.)
2	23	Increase Recycling and Solid Waste Management and Reduction
2	34	Capture, Recovery and Recycling of process gases
2	40	Raise R&D tax incentive for small engines from 5% to 15%

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2	47	Fund Pilot Projects for new technologies
2	55	Private and government programs to disseminate low GHG technologies
2	60	investment in renewable technology
2	62	General incentives for conservation & efficiency & infrastructure
2	78	Recovery and re-use of energy - BTUs out-of-stack
2	81	invest in R&D
<b>Strategic Bucket #3 - Innovate distribution</b>		
3	1	Implement Enhanced Appliance Efficiency Standards; including new boiler efficiency standards
3	20	<b>Related to above</b> *Substitution of High GWP Gases--Substitute high global warming potential (GWP) gases with appropriate substitutes depending on application (e.g. CO2, amonia).
3	27	New climate-friendly products and services
3	28	Technology development
3	36	Industrial ecology/by-product synergy--programs to link the by-products from one industry with use as the feedstock for other industries
3	37	Negotiated Agreements--to promote GHG reductions in particular sectors, a state government may enter into direct voluntary or negotiated agreements with industries or industrial sectors. Legislation requires (need to develop metrics).
3	42	Tradable GHG tax credits
3	43	Organize supply chains to reduce transportation costs & emissions
3	46	Invest in small entrepreneurs who are trying new energy saving technology
3	65	Public funding of technology demonstration projects
3	82	link technology developers to corporate partner
<b>Strategic Bucket #4 - Education and training that reduces emissions</b>		
4	11	Energy Management Training
4	38	Energy Efficiency Resource Standard -- consumers gain E2 credits to sell to utilities
4	39	R&D funding/tax credits for new technology development
4	41	Mechanisms to distribute knowledge on GHG reduction techniques to small businesses
4	44	Midwest regional approach to cap and trade
4	45	Incorporate "Green" with "Lean" -- don't start with GHG reductions as goal; start with competitiveness, savings and efficiency
4	51	Sector based goals
4	57	GHG reduction given higher priority in Green Tier
4	58	Green Tier - change / evolve to standing council for advising and education
4	59	"Energy Advantage" brand program (akin to Energy Star)

NOTE: #'s 1-48 were provided by WRI and Work Group Members  
 #'s 49-85 were developed during the brainstorming session at the 8-30-07 Industry Work Group Meeting

4	61	Expand WMEP to include GHG emissions
4	64	Quantify emissions by sector
4	66	Tools to quantify emissions (to business)
4	67	On-site generation evaluation and economic study
4	68	Utilize / emphasize existing programs
4	69	What are existing incentives / resources for GHG reduction?
4	71	Macro-measure of state industry emissions - direct and indirect
4	72	Emissions per quality job growth
4	73	Provide feedback to industry on emissions and recognize leaders (smart meters) - immediate, medium & long term -
4	74	Technologies to "down-cycle" to small business
4	79	Government regulations and policies governing BTUs out-of-stack #78
4	80	PART A - encourage WI-IND to invest in technology / application / best practices out-of-state
4	80	PART B - encourage WI-IND to invest in GHG technology and best management practices
4	83	#81 & #82 find state funding sources W.I.N. focuses on GHG companies
4	84	WI explore / lead midwest approach to reduce GHG and preserve WI - strategic advantages
4	85	create Gaylord Nelson Award - similar to Forward Award

# Paper, packaging & forest products

**How StoraEnso North America  
Manages Energy Conservation &  
Efficiency**

# How StoraEnso NA Manages Energy Conservation & Efficiency



- Mandate – global & divisional
- Awareness
- Set goals
- Measure
- Review
- Benchmark
- Efficiency committee / teams
- Conservation competition
- Pursue waste aggressively
- Seek help from others
- Reward results

# How StoraEnso NA Manages Energy Conservation & Efficiency



## Management Mandate

### ➤ **REDUCE ENERGY USE PER PRODUCT TON!**

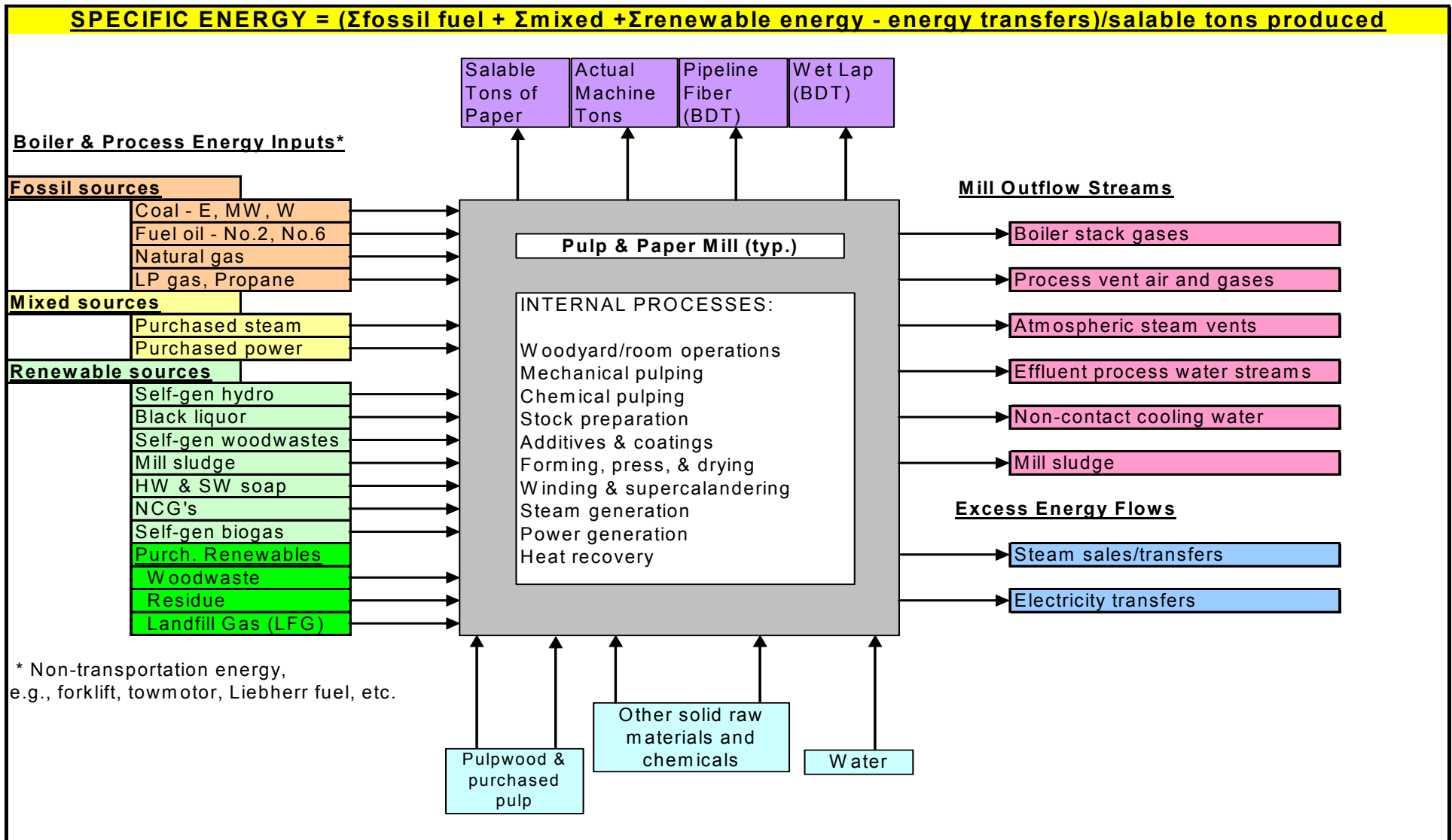
- Energy Efficiency Committee
- Goals & Expectations
  - Consumption per ton reporting
  - Consumption per ton reduction goals
  - Educate everyone
  - Brainstorm C/E ideas
  - Implement C/E
  - Monitor results
  - Report progress

# How StoraEnso NA Manages Energy Conservation & Efficiency



- Specific Energy = energy consumed per product ton
- Perimetric specific energy (site boundary)
  - Sum all incoming energy, subtract energy sold
  - Divide by tons you choose (salable, gross, etc.)
  - High degree of measurability, but be consistent
  - Apply energy reduction goal (%) to entire facility
- Process specific energy (PM, fiber line/dep't, etc.)
  - Measure/allocate energy, subtract condensate return
  - Divide by tons (prime, salable, BDT, etc.) – be consistent
  - Reduction goal can apply to production line
  - Results/trends meaningful to line personnel!

# How StoraEnso NA Manages Energy Conservation & Efficiency



# How StoraEnso NA Manages Energy Conservation & Efficiency



## Energy Efficiency Teams

- Corporate team
  - Meetings and mill tour
  - Energy reduction goals
  - Focus on consumption: cost savings will follow
  - Achievements:
    - 4-5% annual energy reduction
    - Monthly reporting
    - Best practices
    - “Do” list → “Done” list
  
- Mill teams
  - Mill Manager’s discretion
  - Various team types

# How StoraEnso NA Manages Energy Conservation & Efficiency



## Seek help and be resourceful

- Project funding - internal:
  - Competition for capital – conservation projects
  - Mill replacement budget (capital)
  - Mill routine maintenance budget (savvy)
  
- Project funding and technical assistance – external:
  - Focus On Energy®
  - Utilities
  - Industry groups
  - Federal agencies
  - Suppliers

# How StoraEnso NA Manages Energy Conservation & Efficiency



## Some causes of lower energy efficiency

- Culture, lack of awareness, or even apathy
- Inefficient equipment design, condition, or operation
- Cogeneration using condensing turbines
- Production of own mechanical pulp (vs. purchased)
- Non-recovery / non-use of secondary heat (e.g., TMP)
- Old or poorly maintained siphons, steam traps, etc.
- Startup/learning curve following major rebuilds
- Equipment ignored or defeated in rebuild
- No one person assigned to aggressively pursue energy waste, efficiency projects, conservation, etc.

# Focus On Energy

Program Update Meetings  
June 2007

# What is Focus on Energy?

- Statewide Programs
  - Energy Efficiency
  - Renewable Energy
  - Education Training
  - Financial Incentives

# Why Programs?

- Improve efficiency
- System reliability
- Promote rural economic development
- Consistent statewide geographic coverage
- Reducing environmental impact

# Focus on Energy Provides...

- Financial Incentives
- Education and Training
- Unbiased Technical Assistance
  - Do not endorse any company or specific product

# Focus on Energy Markets

- Renewable
- Residential
- Business

# Renewable Energy

- Biogas
  - Farm
  - Municipal/Industrial – not landfill gas
- Non Residential Biomass Combustion
- Solar Electric
- Solar Water Heating
- Customer Owned Wind
- Also Residential Incentives

# Residential

- Apartment and Condo Efficiency Services (ACES)
  - ENERGY STAR Lighting
    - CFLs, LED holiday lights, fixtures
  - Appliance and Plug Load
    - Water heaters, clothes washer, electronics
  - Home Performance with ENERGY STAR
    - Existing homes, remodeling, retrofit
  - Targeted Home Performance w/ ENERGY STAR
    - Limited income customers
  - Wisconsin ENERGY STAR Homes
    - New construction
  - Efficient Heating and Cooling
  - Information and Education - outreach
-

# Business Programs

- Four Sectors
  - Commercial,
  - Industrial,
  - Schools and Government
  - Agriculture
- Market Channel Programs
  - Lighting, HVAC, New Construction, Motors and Drives, Food Service, Commercial Specialty, Dairy,

# Two Types of Incentives

- Prescriptive
- Custom

# Prescriptive Incentives

- Common technologies
- One-for-one replacement
- \$20,000 per project limit
- No prior approval needed
- Streamlined application process

# Custom Incentives

- For projects that do not fit EXACTLY on the prescriptive form
  - Non one-for-one projects
  - Emerging technologies
- Must work with an energy advisor
- Must have Focus on Energy involvement PRIOR to installation

# Custom Incentives

- Tiers based on:
  - Customer economics
  - Market acceptance,
  - Inherent risk
- Two Tier Incentive Structure
  - **Tier 1** - \$.04/kwh, \$125/peak KW, \$.40/therm
  - **Tier 2** - \$.06/kwh, \$200/peak KW, \$.60/therm

# Changes to Focus on Energy

# Act 141

- Restructured Focus
- Transferred Oversight to the PSC
- Secured Funding
  - 1.2% of IOU Revenue

# Implications for Focus

- Increases budget for incentives
  - Annual Limit \$500k
- FY 08 will be an 18 month fiscal year
- Allows State facilities to participate
- No LP

# Eligibility Changes

- Eligibility based on both electric and gas utilities
  - For gas saving measures must have a participating gas utility
  - For electric saving measures must have a participating electric utility

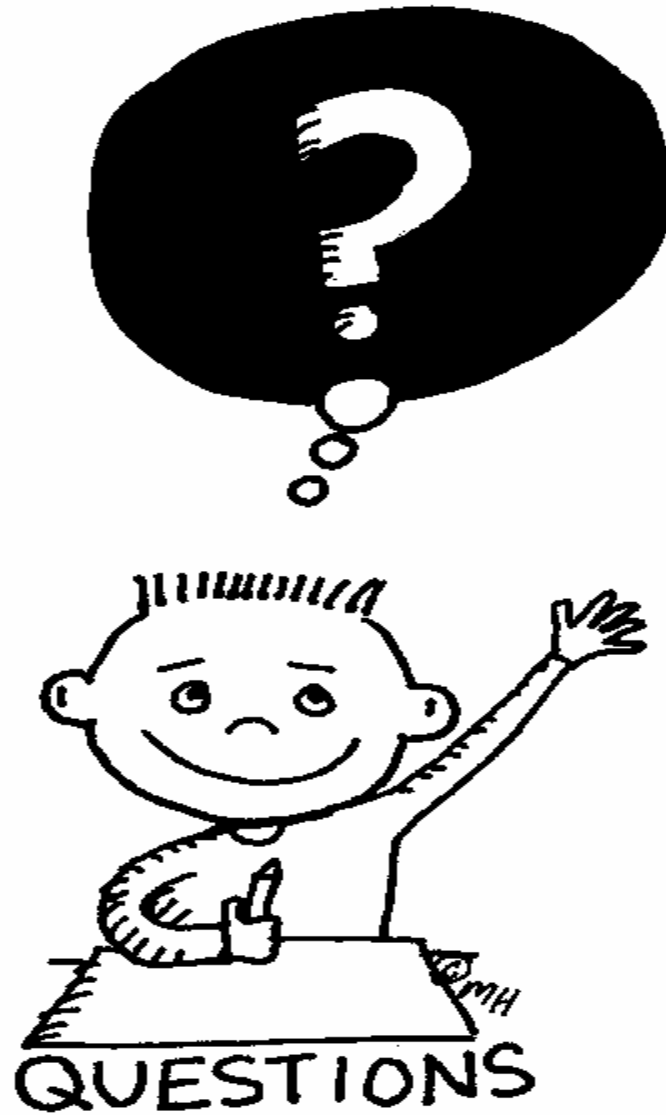
# Other Utility Initiatives/Programs

# Other Utility Programs/Initiatives

- Energy Incentives from We Energies
  - 55 MW over several years
  - Goal: reducing peak demand
  - Joint prescriptive program
- Wisconsin Public Service
  - 32 MW; goals are also to reduce peak demand, serve underserved markets
- Xcel
  - Hometown checkups, economic development efforts

# Other Utility Programs/Initiatives

- Alliant Energy
  - Shared Savings program
- MG&E
  - Offers energy audits to business customers; financing program
- Muni and cooperative utilities
  - Commitment to Community programs
  - WPPI's additional services
  - Dairyland Power's services



## **Wisconsin Global Warming Task Force**

### **Draft Notes from August 30, 2007 meeting of the Industry Work Group**

**Attendance:** Paul Linzmeyer, Steve Dunn, David Stringham, David Oughton, John Piotrowski, Scott Manley, Dave Gardner, Clare Stapleton-Concord, Ed Wilusz, Ken Zak, Satya Rhodes-Conway, Caroline Garber, Douglas Drake, John Imes, Tim Clay, Nina Plaushin, Scott Johnson, Nick Sayen, Steve Steinpreis, Charley Cole

#### **I – Welcome & review of agenda**

#### **II – Open Meetings Review**

- Reviewed issue of “walking quorum” - no questions

#### **III – Round table introductions and statement-of-goals for meeting**

#### **IV – Scott Johnson - Strategic Choices**

- Suggested a 10/4 strategic policy process
- Reviewed Strategic Choice PowerPoint
  - Mission: no change from 8-17-07
  - Objective: no change from 8-17-07
  - Key Strategies: revised from 8-17-07
    - First bucket: no change in wording
    - 2<sup>nd</sup> bullet (metrics) moved to key issues
    - Second bucket: no change in wording
    - Third bucket: Innovate distribution, implementation and use of technologies that reduce GHG emissions
    - Fourth bucket: Provide industry and small-medium enterprises with on-going education, training and technical assistance in reducing GHG emissions
- Key Issue of Metrics
  - State goal and how measured?
  - Industry fair share and goal?
  - Industry for direct and indirect GHG emissions – how much?
  - Who sets and decides baselines and measurement?
  - New metrics e.g. – GHG ton / FTEE

#### **V. – Policy Brainstorming Session**

- Please see separate files – posted as ‘Meeting Products’
- Discussed mechanics of processing list, group input for those not able to attend next meeting

#### **VI. – Arrangements for next meeting**

- MEETING WILL BE FROM 11AM – 3 PM IN CONFERENCE ROOM A, OSHKOSH DNR SERVICE CENTER, 625 E. COUNTY ROAD Y SUITE 700, OSHKOSH
- Decided to extend meeting time to 4 hours with hopes of moving through entire process – 9:00 am – 1:00 pm, will try to arrange for working lunch
- Will ask about meeting at Quad Graphics facilities in Lomira, WI on September 14<sup>th</sup>