Disaster Preparedness Newsletter

Volume 2, Number 5

May, 2009

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U.S. Disaster Watch

Climate Change Dynamics

The earth's climate is predicted to change because human activities are altering the chemical composition of the atmosphere through the buildup of greenhouse gases - primarily carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons. The heat-trapping property of these greenhouse gases is undisputed. Although there is uncertainty about exactly how and when the earth's climate will respond to enhanced concentrations of greenhouse gases, observations indicate that detectable changes are under way. There most likely will be increases in temperature and changes in precipitation, soil moisture, and sea level, which could have adverse effects on many ecological systems, as well as on human health and the economy.

The Climate System

Energy from the sun drives the earth's weather and climate. Atmospheric greenhouse gases (water vapor, carbon dioxide, and other gases) trap some of the energy from the sun, creating a natural "greenhouse effect." Without this effect, temperatures would be much lower than they are now, and life as known today would not be possible. Instead, thanks to greenhouse gases, the earth's average temperature is a more hospitable 60°F. However, problems arise when the greenhouse effect is enhanced by human-generated emissions of greenhouse gases. Global warming would do more than add a few degrees to today's average temperatures. Cold spells still would occur in winter, but heat waves would be more common. Some places would be

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Climate Change Dynamics

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drier, others wetter. Perhaps more important, more precipitation may come in short, intense bursts (e.g., more than 2 inches of rain in a day), which could lead to more flooding. Sea levels would be higher than they would have been without global warming, although the actual changes may vary from place to place because coastal lands are themselves sinking or rising.

Emissions Of Greenhouse Gases

Since the beginning of the industrial revolution, human activities have been adding measurably to natural background levels of greenhouse gases. The burning of fossil fuels - coal, oil, and natural gas - for energy is the primary source of emissions. Energy burned to run cars and trucks, heat homes and businesses, and power factories is responsible for about 80% of global carbon dioxide emissions, about 25% of U.S. methane emissions, and about 20% of global nitrous oxide emissions. Increased agriculture and deforestation, landfills, and industrial production and mining also contribute a significant share of emissions. In 1994, the United States. emitted about one-fifth of total global greenhouse gases.

Other Greenhouse Factors

In addition to man-made greenhouse gases emissions, events in nature can make significant contributions. Volcanic eruptions spew tremendous volumes of greenhouse gasses into the atmosphere. There is also the danger of catastrophic release of methane from Siberian Ice should this region begin to warm. Depending on where one hits, a meteor impact could release tremendous amounts of greenhouse gasses currently trapped in ice, soil, or under the sea.

EPA on Greenhouse Gasses

Change in Course

In mid-April 2009, the U.S. Environmental Protection Agency – EPA – declared that carbon dioxide and five other greenhouse gases associated with climate change are pollutants.

Dan Greenbaum: What they've done here is drawn this connection between CO2 and climate change and the changes to temperature and the effects that will have on conventional air pollutants and therefore on public health.

Dan Greenbaum is president of the Health Effects Institute, an independent research organization heavily funded by the EPA to study the health effects of air pollution.

Dan Greenbaum: Should this finding be solidified, then one could expect they would probably propose some very specific standards for greenhouse gas emissions from automobiles. They could also potentially do it for other sources as well.

Greenbaum said this so-called 'endangerment finding' by the EPA will help lead to the first regulation of greenhouse gases in the United States.

Dan Greenbaum: Carbon dioxide is a by-product of all combustion, and there isn't just a simple control to capture it and make it go away. So it will take much, much more effort to improve fuel efficiency and take other kinds of actions in order to really reduce carbon dioxide substantially.

Greenbaum said the EPA's action has put pressure on the US Congress to create specific legislation to reduce greenhouse gas emissions.

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Florida Feels Effects of Climate Change

Miami Herrald March 2009

In an article by Georgia Tasker appearing in the Miami Herrald on March 28, 2009, the effects of climate change are being felt in Florida. As northern waters warm and tropical waters become hotter, fish are migrating north for cooler waters. At the same time, warm water fish are showing up in unexpected places. Michael Fogarty heads the U.S. Global Ocean Ecosystem Dynamics Program with the National Marine Fisheries Program. His team of scientists has looked at oceans from Alaska to Antarctica; a full third of the 36 species of fish they studied have "made a significant northward shift," according to Fogarty. Other climate changes have been recently documented: Studies say that oceans have warmed an average of 1.8 degrees Fahrenheit over the last 100 years.

- Sooty terns and brown noddies (dark-colored terns) are nesting earlier in the Dry Tortugas.
- Buttonwoods and pines are dying as saltwater rises and does not drain away after hurricane storm surges.
- Salt-loving mangroves and saltwater habitats are advancing inland.
- Scientists had to lure beach-nesting roseate terns to a new beach three years ago after Pelican Shoals in the Keys was washed over and left under water by Hurricane Wilma.
- Half the corals in the Keys have been killed by disease, hurricanes and bleaching in hot water; those remaining are vulnerable to ocean acidification.
- Nine species of dragonflies have moved into Florida from Cuba and the Bahamas, following similar migrations by butterflies, birds and mammals.

Sandy Moret, a fishing guide in the Florida Keys, believes that drainage of the Everglades has affected fishing more than climate change has. He points to the disappearance of tarpon from Florida Bay a decade ago, when sea grasses died. Other fishing guides] talk about some species, their migration has changed because of water warming. . . . And they are catching tarpon, come to think of it, farther north than they did 25 or 30 years ago." 'They also catch bonefish up the shoreline almost to Jacksonville when fishing off the beach. And also off the west coast." The fish normally are found in shallow, warm waters in South Florida and the Caribbean.
Fish are not the only wildlife that appear to be affected.

In the Gulf of Mexico, between Key West and the Dry Tortugas, Boca Grande Key once had a beach wide enough for both picnickers and nesting sea turtles. After years of erosion made worse by rising waters and hurricanes, little beach on the uninhabited island is left, and most of that is now off-limits to people to protect wildlife. Even though sea turtles evolved to cope with hurricanes - females make several nests during the season and sand nests can endure waves washing over them - several Boca Grande nests have not produced hatchlings in recent seasons because of high water.

In nearby Dry Tortugas National Park, hatchlings decreased by 50 percent between 1995 and 2004 because of more intense storms and flooding, according to a study by Sonny Bass of Everglades National Park and his colleagues. "We think climate change is influencing that," Bass said.

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In the Key Deer National Wildlife Refuge on Big Pine Key, "We have higher tides in places and vegetation has shifted to more salt-tolerant species in the last 20 years," said Ann Morkill, National Key Deer Refuge manager.
In the refuge, "We've lost the majority of pines in the lower elevations," she said.

"Pine forests are retreating and are being replaced by mangrove or salt marsh vegetation," said Keith Bradley of South Florida's Institute for Regional Conservation, which is involved in native plant studies throughout the Keys, Everglades National Park and Collier County. The pine rock lands contain the most plant diversity found in South Florida's varied habitats.

The endangered Keys tree cactus is dying because of increasing soil salinity in the lower Keys. Eighty percent of these once-plentiful cactuses have died in the past 10 years, and there are only eight small groups left in the Keys.
The Village of Islamorada is considering buying one of the eight locations - a higher-elevation, nine-acre tract on Upper Matecumbe Key that is privately owned - with a $5.1 million grant from the Florida Communities Trust.

On Sugarloaf Key, groups of buttonwoods have turned into ghost trees as seas have crept inland. Buttonwoods are considered salt-tolerant. Yet, in some places, salt-extruding red mangroves are stretching finger-like roots around dead, gray buttonwoods. In standing water left from a full-moon tide, mosquito fish dart in miniature schools where once there was dry land. Skeletons of pine trees are remnants of a former pineland.

Hurricane Wilma, in 2005, took a giant step onto Big Pine Key in 2005, where five to 10 feet of surge covered the island and left acres of dead pines. Blocked by roads, some of the water couldn't flush away and stood for days.
Then, a six-month drought caked the salt before rain melted it back to saltwater the following spring. After the hurricane caused Pelican Shoals to disappear, wiping out a nesting site of roseate terns, researcher Ricardo Zambrano used recordings of roseate calls to lure the birds to a different nesting site.

Other birds are changing their nesting sites, too. The gray kingbird, which nests in the Florida Keys and South Florida, has moved up the Gulf Coast as far as Cedar Key, which is in Levy County. Brown pelicans, which historically nested in winter and spring in South Florida, began to move to Georgia and the Carolinas in the 1980s.
By the late 1990s and early 2000s, said Jim Rodgers with the Fish and Wildlife Conservation Commission, they began to nest around Chesapeake Bay.

Last year, some pelicans tried to nest all the way up in New Jersey but didn't produce any young, Rodgers said.
Cuban tree frogs now have moved as far north as Gainesville, and nine tropical dragonflies have found a home in South Florida - previously not warm enough for them - indicating that the climate has become more to their linking.
"Manatees are moving north, birds are nesting earlier . . . and lionfish off the Atlantic coast are moving farther north," said Doug Inkley, scientist for the National Wildlife Federation.. Florida is on the front lines of climate change."

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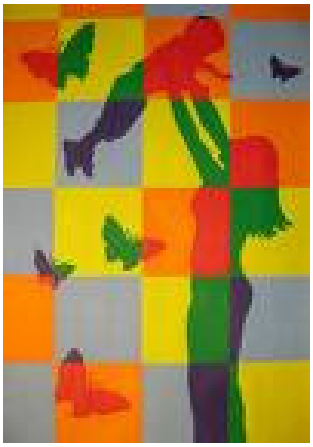
Climate Change Individual Action

...What You Can Do!

Helping the climate is everone's responsibility. Understanding climate change is the first step, but beyond this is climate change activism. Learn what you can do to help.



I. Reduce your carbon emissions

Action for Climate Change supports the following list of actions you can easily undertake for little or no cost and significantly reduce your greenhouse gas emissions.
The actions are listed in priority order - addressing the areas where households generate the majority of their greenhouse gas emissions.

1. Travel

Cars are the highest source of greenhouse gases from households and account for 34% of the total emissions. To reduce your greenhouse gas emissions, aim to leave your car at home once a week.

2. Water Heating

Hot water is the second highest source of greenhouse gases generated by households. There are many things you can do for free to decrease your greenhouse gas emissions, these include:

- Wash your clothes with cold water. Cut your bill by using only the cold cycle on your washing machine. Compared to a hot wash, this will save 4 kilograms of greenhouse gas per wash.
- Take shorter showers. Keep your showers to four minutes; you will save up to half a kilogram of greenhouse gas for every minute.
- Lower thermostat. Most hot water systems come with a thermostat and you can get an electrician or plumber to vary the set temperature. It is recommended that you don't set the thermostat lower than 60ºC. Remember to switch the water heater off if you are going away for more than a few days.

3. Electronic Appliances

Turn electrical appliances off at the wall.
Many appliances use electricity even when they're not doing anything. When appliances are switched off at the appliance, but left on at the wall, they may use some energy called 'standby' power. Typically this is between 1 and 20 watts, with most appliances using less than 5 watts - that's around 45 kilograms of greenhouse gas each year for each item.

4. Heating and Cooling

Don't over-heat or over-cool your home. A difference of one degree can reduce energy consumption and greenhouse pollution by up to 10%.

- Set the temperature as low for heating and as high as you can for cooling.

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• Only heat or cool the rooms you are using and don't leave the system running when you are not home.
• Also dress for the weather, put on an extra jumper or cool down in a sarong!

5. Refrigeration

The fridge uses a lot of energy and the older your fridge is, the higher the probability that it will be a big polluter. Simple actions you can make that will save you up to half a tonne of greenhouse gases include:
• If you have a second fridge that is mostly empty, turn it off.
• Set the thermostat correctly. Fresh food compartments should be set at around 3 ºC to 5ºC and freezers should be set between -15ºC and -18ºC.
• When taking things out of the fridge open the door as little as possible.
• Keep the fridges and freezers in a cool, well ventilated spot, away from the oven and sun.

6. Rubbish

On average households produce around 1.14 tonnes of rubbish per year. It's really easy to reduce your household's rubbish. Take actions such as:
• Say no to junk mail which will reduce the amount of paper that goes to waste each year.
• Take your own shopping bags.
• Purchasing products with reusable packaging and avoid products that are excessively packaged.
• Recycle everything you can!
• Start composting food scraps.
• Never burn trash. Bring it to landfills or make compost of it.

7. Diet

Eat less red meat and move fruit and vegetables. Raising cattle produces tremendous amounts of greenhouse gasses.

II. Carbon Calculator

Use the carbon calculator link below to work out the carbon emissions you generate at home and while travelling. Once you have determined your carbon footprint, try to reduce it.

http://www.actionforclimatechange.org.au/calculate.asp

Another excellent carbon calculator is the one provided by Environmental Protection Agency: **http://www.epa.gov/climatechange/wycd/calculator/ind_calculator.html**

III. Join a Climate Change Action Group

Network with others who share your views and concerns about global warming.

Examples of political action groups you can join are Actions for Climate Change **https://www.conservationvolunteers.com.au/afcc/join.asp**

Global Climate Change Action
http://globalclimatechangeaction.org/

Stop Global Warming.org
http://www.stopglobalwarming.org/default.asp

IV. Lifestyle

• A Carbon Diet is an effective way to understand the

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amount of impact on the environment and how to make meaningful changes.

- A Low Carbon Diet is a way to reduce your impact by choosing food that causes much less pollution.
- Running is the least impactful mode of transportation, followed by the bicycle, whose usage produces no carbon emissions. (The manufacturing of bicycles does emit carbon dioxide and other pollutants.)
- Trees: Protecting forests and planting new trees contributes to the absorption of carbon dioxide from the air.

There are many opportunities to plant trees in the yard, along roads, in parks, and in public gardens. In addition, some charities plant fast-growing trees -- for as little as US $0.10 per tree -- to help people in tropical developing countries restore the productivity of their lands. Conversely, clearing old-growth forests adds to the carbon in the atmosphere, so buying non-old-growth paper is good for the climate as well as the forest.

- Labels: The Energy Star label can be seen on many household appliances, home electronics, office equipment, heating and cooling equipment, windows, residential light fixtures, and other products. Energy Star products use less energy.
- Green Electricity Watch is an independent ranking of GreenPower electricity products offered by Australian electricity retailers, providing consumers with a simple guide to all the GreenPower products available and which ones make a real difference in reducing global warming. It is an initiative of The Total Environment Centre, Australian Conservation Foundation and WWF Australia.
- Cars: Purchasing a vehicle which gets high gas mileage helps to reduce emissions of carbon dioxide.
- The wind energy produced in Denmark, for example, provides about 20 percent of the country's total electricity needs. These methods of energy production emit no greenhouse gases once they are up and running. Many energy suppliers in various countries worldwide have options to purchase part or pure "green energy."
- Carbon offsets: The principle of carbon offset is thus: one decides that they don't want to be responsible for accelerating climate change, and they've already made efforts to reduce their carbon dioxide emissions, so they decide to pay someone else to further reduce their net emissions by planting trees or by taking up low-carbon technologies. Every unit of carbon that is absorbed by trees -- or not emitted due to your funding of renewable energy deployment -- offsets the emissions from their fossil fuel use. In many cases, funding of renewable energy, energy efficiency, or tree planting -- particularly in developing nations -- can be a relatively cheap way of making an individual "carbon neutral". Carbon offset providers -- some as inexpensive as US $0.11 per metric ton (US $0.10 per US ton) of carbon dioxide -- are referenced below under Lifestyle Action.
- Using less animal products: The United Nations' Food and Agriculture Organization reports that rearing livestock contributes more greenhouse gases than all fossil fuel burning combined. A 2006 study from the Department of Geophysical Sciences at the University of Chicago found the difference between a vegan diet and red meat diet is equivalent to driving a sedan compared to a sport utility vehicle.

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5 Climate Myths

Changing the Popular Perceptions

1. We don't really know if the climate is changing or, if so, why. This is a myth. Actually, there is now overwhelming scientific concensus that the climate is that the earth is warming, that this warming trend will worsen, and that human activity is largely to blame.

2. Even if the earth is warming, that may actually help us more than hurt us. Here's the reality: In the short-term there will be winners and there will be losers. For instance, farms and forests will be more productive at some latitudes, but less productive at others. In the long term, though, any possible benefits from global warming will be far outweighed by the costs.

3. There's so much uncertainty - about the science, about the economics - that we need to wait for better information before we can decide how to respond. The reality is that there are several very compelling reasons that we must begin to act right now - and uncertainty itself is one of them Right now, there is about 40 percent more carbon dioxide in the atmosphere than there was at the dawn of the Industrial Revolution. The CO2 concentration is projected to reach twice the pre-industrial level by the middle of this century. This doubling of CO2 is the scenario most scientists have relied on in projecting the likely impacts of global warming. But here's what's really troubling: If we continue with business as usual, by the turn of the century greenhouse gas concentrations will be approaching three times the pre-industrial levels. In other words, we may be facing consequences far more severe than those already projected.

4. We can't afford to address climate change. A growing number of companies are voluntarily committing themselves to greenhouse gas reduction targets. At last count, we had identified more than 40, most either based in the United States or with significant operations here. Some of you may have seen the television ads being run by BP touting its success. The company has cut emissions 10 percent below 1990 levels - eight years ahead of target - and now has pledged to keep them there at least until 2010. Alcoa is aiming to reduce its emissions 25 percent below 1990 levels by 2010. DuPont is aiming for a 65 percent reduction.

5. Even if climate change is real, and even if addressing it is affordable, the issue is so big and so complex, and the threat is so far off in the future, we will never motivate people to do anything about it. As to whether we can get people to move fast enough, or far enough, I think the jury is still out. But the reality is: people are beginning to act. And some who may not be prepared to act will

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Flood Prevention - How To Make Sandbags

Restrict Water Away From Your Home

Here's how to make sandbags and use them to protect your land.

Step 1. Gather the following supplies from a hardware or home improvement store: cloth or plastic sandbags, polyethylene sheeting, sand, a shovel and a wheelbarrow.

Step 2. Plan to work with another person. One person should hold the bag while the other one fills it.

Step 3. Fill the sandbag one-quarter to one-half full with sand. It should weigh about 40 lbs.

Step 4. Fold the empty part of the bag over. Be sure that when you place the bag, the folded-over side is facing down, so that no water will seep in. If one bag leaks, the whole pile will be ruined.

Step 5. Dig a trench around the area you want to protect. (The standard trench is usually 4 to 6 inches deep and 18 to 24 inches wide.)

Step 6. Lay the polyethylene sheeting in the trench and secure it with several sandbags. The sandbags should be placed in the direction of the water flow, and there should be no space in between bags.

Step 7. Complete one row before you begin the next.

Step 8. Stagger the second row on top of the first (similar to the way that bricks are staggered in a wall). This system provides added protection.

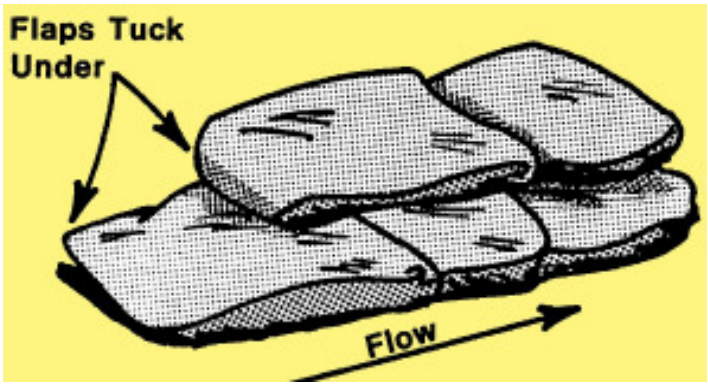
Step 9. Limit your stack to three layers of sandbags, since any more may not be sturdy.

Step 10. Following the rainy season, empty the sand into your garden and save the bags for next year.

Site Selection

When selecting the location for the dike, take advantage of natural land features that keep the dike as short and low as possible. Avoid obstructions that would weaken the dike. Do not build the dike against a building wall due to the forces the dike may place on the building. Leave at least 8 feet to maneuver between the dike and buildings for observation, pumping seepage water and other activities.

Since friction holds a dike from sliding, create a good bond between the ground and the dike. Remove ice and snow since it will melt permitting water to flow under the dike. Remove anything else that is "slippery." If the dike is to be more than about 3 feet high, dig a bonding trench where the dike will be placed. The trench should be at least 4 to 6 inches deep and 18 to 24 inches wide.



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Disaster Humor

A Walk on the Light Side

The ability to laugh at ourselves and revive spirits in the face of disaster is what makes us human. Here are some humorous statements that fly in the face of disaster.

"Wasn't that your sofa I saw floating down the street?" "No, mine was too heavy to float!"

It's always darkest just before the firestorm.

We never had nothing, and now we've lost that!

"We needed a new house, anyway!"

"I'll help you find your house if you help me find mine."

When disaster strikes, duck, grab your knees, and kiss your ass good bye!

That light at the end of the tunnel may be another freight train!

At the end of every rainbow is a pot of gold. I would settle for just the empty pot right now.

It's not Alzheimer's. I really am quite confused right now.

All my "Get Up and Go" just "Got Up and Went!"

It's too late, idiot. Who told you that you could live in a flood plain without flood insurance?

If you don't believe in Christmas or FEMA, you can't live in this crappy trailer.

"Didn't I just see Bush and Cheney surveying downtown New Orleans flood damage?" "No, they came here to fish!"

Nothing renews your belief in God like a good disaster.

"Lost in the disaster: wife and dog." "Reward for Dog!"

"If we get one more day of rain, I am moving to the desert!"

"If it gets much colder, politicians will have to put their hands in their own pockets."

I went to get gas for the generator, and when I got back home, the generator was stolen.

"Looters Beware! This home is protected by Smith & Wesson".

Mom and Dad, I have good news and bad news. The bad news is, "The house was struck by a flying cow in the tornado. The good news is, we will have plenty of meat for the winter."

"It turns out Grandpa was right. He was last seen floating out of town on his arc!"

"As for the economic disaster, you can just take this job and shove it!"

Weather Report: The forecast is for raining dogs and cats, hell's fire and brimstone, real "Wrath of God" weather, leading to flooding, fires, and an abundance of strange domestic animals.

"Is that a tornado approaching? Or did the freight train jump tracks again?"

"The devil is in this storm, but it doesn't scare me. I've been married to his sister for 24 years!"

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Major Economies Forum on Energy and Climate

16 nation talks begin

U.S. President Obama and Secretary of State Clinton met with representatives of the 16 greatest contributors to climate change for a 2-day forum on April 28, 2009. The United States was the largest contributor to greenhouse gasses until recently surpassed by China. India, along with the European Union, Russia, China and the United States, are the top 5 biggest greenhouse gas polluters.

The Major Economies Forum on Energy and Climate was announced in March by President Barack Obama and includes the 16 countries responsible for 75 percent of the global emissions of heat-trapping gases. Its goal is to lay the groundwork for an international agreement to curb climate-changing pollution by December.
That's when delegates from 175 countries will meet in Copenhagen, Denmark, to write a new treaty to replace the 1997 Kyoto Protocol, which expires in 2012. The Kyoto Protocol required 37 countries to cut emissions by a total of 5 percent by 2012.

The Major Polluters Group met to discuss coordinated action and creative approaches to curtail greenhouse gasses. The effort is too large to tackle for even the top two nations, U.S. and China. A coordinated response is needed which will reduce greenhouse gas emissions, champion clean technology breakthroughs, and rapidly disseminate ideas and technology.

In Congress

The effects of climate change are being felt worldwide, and are now quite obvious even to former skeptics. The Environmental Protection Agency in mid April, 2009 declared that greenhouse gasses are dangerous to health and are contributing to global climate change.

After fighting each other for decades, environmentalists and industrial businesses are working together in Congress to clear the air - literally - through a reduction of carbon dioxide emissions.

Draft legislation that Democrats hope to advance next month is "modeled closely" on the recommendations of the group, according to a summary of the measure provided by its authors. USCAP was repeatedly touted by lawmakers in hearings on the legislation last week.

Under the bill, the government would impose a limit on emissions - the proposal calls for a 20% reduction from 2005 levels by 2020. Companies that exceed their pollution limit may purchase credits, or "allowances," from other companies that cut emissions by more than required.

Over time, the cap is reduced, and companies must decide whether to invest in technology to cut emissions, purchase more power from renewable sources or buy additional allowances. Both sides get something: environmentalists, a defined cap on emissions; companies, a smooth transition and more certainty.

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Using a Generator When Disaster Strikes

Don't take chances!

Purchasing a Generator

If you choose to buy a generator, make sure you get one that is listed with the Underwriter's Laboratory (UL) or Factory Mutual (FM). Look at the labels on lighting, appliances and equipment you plan to connect to the generator to determine the amount of power that will be needed to operate the equipment.

For lighting, the wattage of the light bulb indicates the power needed. Appliances and equipment usually have labels indicating power requirements on them. Choose a generator that produces more power than will be drawn by the combination of lighting, appliances and equipment you plan to connect to the generator including the initial surge when it is turned on. If your generator does not produce adequate power for all your needs, plan to stagger the operating times for various equipment.

If you can not determine the amount of power that will be needed, ask an electrician to determine that for you. (If your equipment draws more power than the generator can produce, then you may blow a fuse on the generator or damage the connected equipment).

Using a Generator

Follow the directions supplied with the generator. Under no circumstances should portable generators be used indoors, including inside a garage. Adequate ventilation is necessary and proper refueling practices, as described in the owner's manual, must be followed.

It is a good idea to install one or more Carbon Monoxide (CO) alarms inside your home (following manufacturer's installation directions). If CO gas from the generator enters your home and poses a health risk, the alarm will sound to warn you. Many home fires and deaths from carbon monoxide poisoning have occurred from using a generator improperly.

Statistics from the Northeastern Ice Storm of January/February 1997 show that as many as 100 people were killed and 5,000 people injured by misuse of a generator at home.

Be sure to let the generator cool down before refueling. Store fuel for the generator in an approved safety can. Use the type of fuel recommended in the instructions or on the label on the generator. Local laws may restrict the amount of fuel you may store, or the storage location. Ask your local fire department for additional information about local regulations.

Store fuel for the generator out of doors in a locked shed or other protected area. Do not store fuel in a garage, basement or anywhere inside a home, as vapors can be released that may cause illness and are a potential fire or explosion hazard.

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Using a Generator When Disaster Strikes

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Do not hook up a generator directly to your home's wiring. The safest thing to do is connect the equipment you want to power directly to the outlets on the generator. There are several reasons why hooking up a generator to your home's electrical service is not a wise idea.

Home-use (non-industrial) generators do not supply enough amperage to supply sufficient power for today's homes (that is, to run a furnace, lighting, appliances and other electronic equipment). Unless your home's power supply was installed with a disconnect to the main power feeding lines, power you put into your home from a generator could backfeed into the main line and cause problems for the electrical utility company, your neighbors or yourself.
Backfeeding is supplying electrical power from a generator at the residence into the incoming utility lines. This occurs when the necessary equipment used to isolate the generator from the incoming power lines is not installed.

The 1999 National Electrical Code®, published by the National Fire Protection Association, is a nationally recognized standard for safe electrical installations. The NEC® does permit an interface between the normal power source (generally the electric utility) and an alternate power source (such as a standby or portable generator) provided that the proper transfer equipment that prevents backfeeding is used.

Simply connecting a cord from the generator to a point on the permanent wiring system and backfeeding power is an unsafe method to supply a building during a utility outage. Improper connection methods not only endanger the building occupants, but pose a serious hazard to electric utility workers as well.

There are a number of products available that will provide either an automatic or manual transfer between two power sources in a manner prescribed by the NEC®. When selecting a product for this function, it should be one that has been evaluated for safe performance by a nationally recognized testing organization such as Underwriters Laboratories.

The product must be installed according to the NEC®, all applicable state and local codes, and the manufacturer's instructions. Homeowners should only attempt to install such products if they have a thorough knowledge of safe electrical installation practices for this type of equipment. Otherwise a qualified electrician should be contacted.
If you have additional questions, please consult a licensed electrician, your local fire department or your community's building safety or engineering department.

This information was developed with technical advice from the National Fire Protection Association (publisher of the National Electric Code

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Questions and Answers about Swine Flu

Epidemic or Pandemic?

In late April, 2009 Mexico City reported deaths due to a new swine flu virus that seemed to be spreading from person to person. Soon other countries including the United States, Canada, Spain, Australia, and Switzerland were reporting cases. With approximately 1 million people on airline flights at any moment, the potential for a worldwide pandemic is great. Here are some questions and answers about the new swine flu.

Q: What is swine flu?
A: It is an influenza virus, like the strains that cause such misery to people during the winter months. Flu viruses also infect many other species of mammals, as well as birds, and this strain causes a respiratory disease in pigs. It is related to human viruses, but influenza tends to stay in its own "host" species.

Q: How does it pass from pigs to people?
A: The most common method is through farming, with humans handling infected pigs. The flu can then move on to other people through coughing, sneezing, or touching infected people or surfaces and then touching your mouth or nose.
Such infections are rare because swine flu viruses do not easily attach to human cells of the throat and lungs. However, recent studies have shown human infections may be more common than once believed.

Q: Can you catch swine flu by eating pork from an infected animal?
A: The Mexican government and the World Health Organization have ruled out any risk of infection from eating pork.

Q: What are the symptoms?
A: The Mexican government reports seeing these symptoms:
-- Sudden fever above 100 degrees Fahrenheit.
-- Dry cough and/or sore throat.
-- Headache.
-- Joint pain.
-- Nasal congestion.
-- General fatigue.

Q: Those sound like seasonal flu symptoms. How is this flu different?
A: Swine flu may cause more severe vomiting and diarrhea. In rare cases, flu virus attacks the lungs, a complication that can be fatal. This strain also differs because it is so new. As a result, no one has natural immunity to it, unlike with seasonal flu.

Q: The numbers of infected people are rising quickly. Is this a very infectious disease?
A: The CDC says it does not yet know. Occasionally a swine flu virus in a person mutates in a way that makes it more easily transmitted from person to person.
People are usually contagious for as long as they are symptomatic -- typically four to five days for adults and longer for children.

Q: I got a flu shot last fall. Will that protect me?
A: CDC officials say they are "very pessimistic." Tests of last fall's seasonal vaccine and the new virus show no cross-reaction, suggesting that people who got the shot have no added protection against this flu strain.

Q: How should I protect myself and my family?
A: If you have no symptoms, be preventive: Wash your hands often with soap and water. Cover your mouth and nose when you cough and sneeze, and discard used tissues immediately. Avoid close contact with people who are sick.

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Questions and Answers about Swine Flu

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If you feel sick, stay home from work and school. Go to the hospital if you experience severe symptoms, such as difficulty breathing.

If you know you have been exposed to swine flu, get lots of rest, and talk to your doctor about the antiviral drugs oseltamivir (trade name Tamiflu) or zanamivir (Relenza). These drugs may make the illness milder and work best if started within two days of getting sick.

Q: I see people in Mexico wearing masks. Should I get one?
A: Mexico's government is recommending surgical masks for its citizens, but the CDC says the general U.S. public does not need them.

Q: Why are people in Mexico City dying, while there have no confirmed deaths in the United States.
A: Cases are being intercepted early in the United States, while people can still be helped. The CDC in Atlanta does expect deaths in the United States, and has set up a special Command Center to study the new virus and develop a vaccine. Congress has appropriated 1.2 billion in funds to fight the outbreaks.

The World Health Organization (WHO) has raised the threat level to Level 4, meaning the virus can spread from person to person and infect entire communities. Level 5 has been discussed (worldwide pandemic), but not agreed upon at the time of this writing. Travel precautions to infected areas are advised.

This report includes information from David Brown, the Associated Press, Reuters, the Los Angeles Times, and the U.S. Centers for Disease Control and Prevention.

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Deadly Swine Flu Epidemic

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