



Patrick Mazza is Research Director for Climate Solutions and co-author of *Stormy Weather: 101 Solutions to Global Climate Change*.

Global Warming: Humanity's Power and Energy Solutions

Patrick Mazza

The warming of the planet is emerging as one of the most profound challenges ever to face humanity, spanning moral, political, economic, and environmental dimensions. Climate change is not just another course on a plate full of environmental and social issues—it is *the* plate, and if the plate is broken, then the vast challenges humanity now faces will become staggering—from preserving biodiversity, to making a peaceful world order, to spurring just and sustainable development for the world's poor.

Over the past century, the atmosphere has warmed around 1 degree Fahrenheit. During this

Global warming represents the world's premier environmental justice issue.

century, it could warm up 10 degrees more. That would be the most radical climate change since the end of the last ice age 10,000 years ago, affecting every ecosystem and human society on Earth. Pollution from burning fossil fuels—coal, oil and natural gas—represents the bulk of the global

warming challenge.

Approximately 80% of U.S. global warming emissions emerge from fossil fuels. Therefore,



Melting glaciers cause higher oceanic water levels. (Boulder Glacier, WA)

© Austin Post, 1967

by mainstream science. There is virtually no argument against this anywhere except in the U.S. Most of the prominent declared skeptics have documented connections to the fossil fuel industry. Scientific data on the human contribution is overwhelming. We have profoundly changed the chemical composition of the atmosphere by adding gases that trap solar radiation.

The major greenhouse gas, carbon dioxide (CO₂), has increased by 31% in the atmosphere since the start of the industrial revolution

climate change solutions center on using energy more efficiently and developing renewable sources. The shift away from fossil fuels at the same time diminishes the drive to war and empire so visible today in U.S. relations with the Middle East, and provides a basis for sustainable development in impoverished nations. Even if we were not facing a global warming crisis, there would still be compelling reasons to move to sustainable energy.

The Human Role in Climate Change

The human responsibility for global warming is now accepted

in 1750. Antarctic ice cores, which contain tiny gas bubbles that provide a long-term record of the atmosphere, confirm that one-third more CO₂ is present in the atmosphere now than at anytime in the last 420,000 years.

“During the last few decades, humans have emerged as a new force of nature,” stated Oregon State University marine zoologist Jane Lubchenco. “We are modifying physical, chemical, and biological systems in new ways, at faster rates, and over larger spatial scales than ever recorded on Earth. Humans have unwittingly embarked upon a grand experiment with our planet. The outcome of this experiment is unknown, but has

profound implications for all of life on Earth.”

Global warming represents the world’s premier environmental justice issue. Several centuries of global warming pollution released into the atmosphere—primarily by developed industrial nations—are having climate impacts that disproportionately affect the poor in developing nations. The docu-



Global warming can flood rivers and estuaries.

mented rise in extreme weather events from storms, floods, and droughts is particularly devastating for people who subsist on natural resources and do not have the disaster recovery capacities of richer nations. Global climate projections paint especially grim scenarios for a drought and disease-ravaged Africa. At the other end of the world, the Inuit peoples of the Arctic are already seeing declines in animal populations as the result of melting ice.

But the rich world is by no means exempt. Consider the 2003 European summer heat wave that resulted in at least 20,000 deaths; the record four hurricanes that ravaged Florida in 2004; or prolonged droughts with resulting wildfires in the Western U.S. These are only a few of a multitude of apparent global warming impacts. For a constantly updated record of extreme

weather events striking the world, visit www.heatisonline.com.

Of greatest concern are *global warming feedbacks* in which the climate change effects cause further change. Here are two of the most serious:

- The Amazon rainforests face a serious threat from changing global rainfall patterns that could result in drying, fires, and mass forest dieback, releasing huge amounts of stored carbon into the atmosphere. This is the major reason that planetary vegetation, which now absorbs around 2 billion tons of carbon, is projected to turn into a net carbon emitter by mid-century.

- Arctic permafrost, which has soaked up globally-significant levels of carbon, is already becoming a net source of atmospheric carbon.

The Earth’s climate system is like a train that takes some time to slow down. We must begin putting on the brakes now in order to have a chance of avoiding or ameliorating catastrophic mid-century scenarios.

Threats to the Northwest

Water is the defining element of the Northwest. We consider forests, salmon runs, snowcapped mountains, and abundant rivers to be enduring features of Northwest life. But each is dependent on the right amount and quality of water arriving at the right time. If we disturb the waters, it spells trouble.

Such disruption is the greatest potential danger posed by global warming in the Northwest. Average regional temperatures are projected to increase 5 degrees

Fahrenheit by around 2050. Because temperature affects global circulation patterns in many ways, global warming is projected to intensify regional swings toward drought and extreme rainfall. Climate models suggest a nine percent increase in winter precipitation and a five percent decrease in the summer by around 2050. Greater heat also will make for more evaporation and drier conditions.

The largest single projected impact is on mountain snowpack, on which the Northwest relies to feed rivers and streams during normally dry summer months. By 2050, the Cascade snowpack is predicted to diminish by 60%. Greater evaporation caused by warmer temperatures would add to the water stress. Some rivers west of the Cascades will experience higher winter flows, thus increasing flood risks in basins that lie mostly below snowline.

It is now time for us to fully understand the new landscape, one in which we have indeed become a force of nature. Our society is characterized more than any other factor by high use of fossil power. It is no accident that

the abuse of power reflected in this over consumption is threatening us with the worst environmental catastrophes in human history.

In addressing climate change and its impacts, we can learn how to master our powers and live within the limits. These are vital lessons not only for dealing with global warming, but with the entire future sweep of human habitation on this planet. ~

By 2050, the Cascade snowpack is predicted to diminish by 60%.

Our Energy Choices

Transportation	Housing	Energy Use	Continuum of Action Personal Choice Systemic Change
Take the bus or ride your bicycle to work or school one day a week.	Make a family commitment to turn off the lights when a room is not being used.	Read <i>Stormy Weather: 101 Solutions to Global Climate Change</i> . Give a copy to a friend.	
If you have a car that runs on diesel fuel, replace or supplement gasoline with biodiesel.	Visit the Home Energy Saver website to learn how to reduce your heating needs: http://hes.lbl.gov	Eat less red meat. Cattle release 65 to 85 million tons of methane into the air per year.	
Organize a carpool with your work colleagues or carpool with friends for social activities.	Take a class on solar technology. www.solarwashington.org	Plant a tree in your yard. Trees & plants capture CO ₂ and give off oxygen.	
Organize an "Alternative Transportation" presentation for your parish.	Use new <i>Energy Star</i> units when replacing old appliances, toilets, and showerheads.	Join a volunteer utility program. See www.rnp.org to sign up for green energy in ID, MT, OR, or WA.	
Actively support a regional mass transit proposal. Talk with neighbors about why you support it.	Make a commitment to reduce the amount of trash your household produces.	Write a letter to your Mayor in support of your city using more power from wind energy.	
Invest in a hybrid vehicle. Visit www.fueleconomy.gov to find out if you qualify for a tax credit.	If building a new house, hire a green-building specialist for consultation.	Organize with co-students or coworkers to install photovoltaic systems on campus buildings.	
Become a board member of your city's Department of Transportation or regional transit solution.	Invest in a solar-powered water heater or install a solar panel at your church.	Work with your state legislator to draft a bill granting tax credits for efficiency upgrades and solar installation.	

Alternative Energy Resources

Biodiesel Fuel

Dr. Dan's Alternative Fuelwerks—www.fuelwerks.com

Seattle Biodiesel—www.seattlebiodiesel.com

Alternative Energy

Climate Solutions—www.climatesolutions.org

Honor the Earth—www.honorearth.org

NW Seed—www.nwseed.org

Interfaith Climate and Energy Campaign:
www.ProtectingCreation.org or (202) 544-3110

Solar Washington—www.solarwashington.org

Solar Living Institute—www.solarliving.org

The Renewable Northwest Project—www.RNP.org

U.S. Dept. of Energy, Energy Efficiency & Renewable Energy: www.eere.energy.gov/regions

Green Building

Art of Natural Building: Design, Construction, Resources. Kennedy, Smith, and Wanek, Editors.

Johnston, David and Kim Master. *Green Remodeling: Changing the World One Room at a Time*.

SeaGreen—Greening Seattle's Affordable Housing.
www.seattle.gov/housing or (206) 684-0304.

Magazines

Home Power—www.homepower.com

Books

Dahge, Bob. *People's Power Primer: Renewable Energy for the Technically Timid*.

Dauncey, Guy and Patrick Mazza. *Stormy Weather: 101 Solutions to Global Climate Change*. New Society Publishers, BC, Canada. 2001.



Rev. Paul B. Benz is Director of Lutheran Public Policy of Washington State. Contact him at pbenz@lcsnw.org.

Care For Creation: A Priority of Faith

Rev. Paul Benz

Care for Creation is inseparable from our faith. We are created in God's image, *Imagio Deo*, indeed by God's very breath and hands. The word "Adam" in Hebrew is "red earth." Thus, we have the common funeral phrase "earth to earth and ashes to ashes." Our very composition is made from elements of the earth.

The strands and fibers of the web of creation have been stretched, pulled, and severed. Yet, healing and hope—sometimes dormant, sometimes active—have always been present. Not only did God see creation as good and give us a role as tillers and caregivers, but God chose to come into the world as one of us to bring healing and hope.

Sacraments from the Earth

The basic elements of two of our sacraments are central to creation: the waters of Baptism and the bread and wine of the Eucharist. Out of the waters of Baptism, we are made children

The earth dries up and withers,
The world languishes and withers;
The heavens languish together with the earth.
The earth lies polluted under its inhabitants;
For they have transgressed laws,
Violated the statutes,
Broken the everlasting covenant.

—Isaiah 24:4-5

of God. God calls us to be stewards of creation and its natural resources. In the bread and wine of the Eucharist, Christ is present. God calls us to be

advocates for the poor and vulnerable among our human species and in the natural creation.

Just as there is brokenness and separation in the creation account, so there is brokenness and separation between the human community and creation. Since the industrial revolution, this has led to a combination of alienation and domination evidenced in creation in so many ways from global warming and deforestation, to the lingering affects of nuclear production.

How does this connection between faith and the environment relate to the political realm and the way in which we use the earth's resources? The sacraments call, strengthen, and renew us to be servants and advocates for a world that is broken and abused. Our model advocate for justice is the one whom we meet in the bread and wine of the Eucharist. Jesus reached out to touch those in need of healing, and you and I—as God's baptized children—are now Jesus' healing agents. There is no doubt that our ecosystem is in need of healing and restoration.

Being a Green Witness

Our daily witness as people of faith is guided by the Church and Scripture. It speaks to our personal and collective use of creation's natural resources. The twentieth century saw a huge abuse and extraction of the earth's natural resources, primarily by members of developed countries. Our traditional non-renewable energy sources of oil and coal are being depleted every day. Our dependence on them is harmful

to creation, e.g. global warming, and is a dismal witness by people of faith.

In the past two to three decades we have seen an increase in the development, promotion, and use of alternative energy sources. Altering our lifestyle—from driving less to changing how we heat and insulate our homes—is an essential daily

"Our ecosystem is in need of healing and restoration."

witness of connecting our faith to the environment. Alternative energy choices and energy efficiencies are linked to how we build our homes, our places of worship, and our schools. Green building codes for new congregations are available from denominational offices such as the Evangelical Lutheran Church in America. LeRoy Hedman, Pastor of Georgetown Baptist Church in Seattle, has successfully implemented energy efficiencies and education at the congregational level, and is an excellent resource for faith-based alternative energy use.

Being a Green Witness means staying on top of legislation that lessens our reliance on fossil fuels and boosts our commitment to alternative sources of energy. Call, write, or email your state legislators and ask them to support the "green bills" currently being debated in the Washington State Legislature (see "Advocacy" page 11). The Northwest has the potential to lead the country in alternative energy. Make your voice heard! 🌱

Are you a Green Congregation?

Consider having your Parish Council conduct an initial energy audit. Review these questions to assess the environmental impact of your parish.

Committees and Staffing

- ◆ Is there a *Creation Awareness and Care Committee* in your parish?
- ◆ How is care of the Earth and environmental stewardship a part of each staff person's responsibility?
- ◆ How do committees incorporate this element of our faith into planning?

Educational Programming

- ◆ Do you have any observances of days related to care of all creation, e.g., Feast of St. Francis, Earth Day, right to life, etc.?
- ◆ Is there a parish resource library, magazine rack or bulletin board that includes church documents and materials on care of God's creation?
- ◆ Do RCIA, sacramental preparation programs, adult education, youth programming, and small faith groups include an environmental component?
- ◆ Do liturgy, ritual, homilies, and prayer incorporate Earth community consciousness?

Budget, Building

- ◆ When remodeling, are energy efficiency and Earth consciousness factored into the planning?
- ◆ Does your parish recycle on a daily basis and take special measures to recycle during and after large events? Are plates and glasses used when possible, instead of plastic and paper?
- ◆ What steps are you taking to become a "Green" congregation: conservation, using Fair Trade products, completing an energy audit?
- ◆ Do all parish facilities reflect the simplicity of the Gospel and stewardship of natural resources?

Outreach and Advocacy

- ◆ Promote Eco-justice efforts and legislative advocacy
- ◆ Bring church teachings on the environment to the public square
- ◆ Contact Earth Ministry for parish resources: www.earthministry.org
- ◆ Support the "green bills" currently being debated in the Washington State Legislature (see "Advocacy" on page 11).

"Care for the earth is not just an Earth Day slogan, it is a requirement of our faith. We are called to protect people and the planet, living our faith in relationship with all of God's creation.

—U.S. Catholic Bishops, 1998

BENEFITS OF BEING A GREEN CONGREGATION



Builds strong community.

By working together with new and different people on a common project, church members draw closer together and make new connections.



Saves your parish money.

Doing an energy audit can reveal many ways in which your parish can improve energy efficiency and implement smart conservation measures.



Provides opportunity.

People of all faith traditions care about clean air and drinking water. Working together can build ecumenical and interfaith bridges.



Stimulates a ripple effect.

First United Methodist Church in Eugene, Oregon sponsored an educational program about Community Supported Agriculture (CSA). After meeting a local farmer fifty families signed up for shares in this local farm, creating greater demand for CSA products.





Yalonda Sindé is Executive Director of the Community Coalition for Environmental Justice (CCEJ).

Who Gets Burned by Energy Policy?

Yalonda Sindé

the environmental justice movement combines civil rights and environmental activism. People of color, indigenous people, and poor people bear a disproportionate impact of environmental hazards; therefore, these groups are at the forefront of the movement. We seek to undo institutional racism and classism—the root causes of many environmental problems.

While the movement takes on David and Goliath type battles with polluters, it also addresses issues of urban sprawl, community development, sustainable energy, and transportation. In contrast to the traditional environmental movement, known for using legal and political strategies to protect the environment, the

ment, exacerbates poverty, creates illness, and leads to violence and corruption. Follow the trail of oil money, and you often find a trail of blood.

Global Implications

The Nigerian people of Ogoniland have witnessed such a trail of blood. In the late 1950's, Shell Oil set up operations that contaminated the land, water, and air to such a great extent that the Ogoni people can no longer farm, fish, drink the water, or breathe clean air.

In 1990, the Movement for the Survival of Ogoni People (MOSOP) was formed. Poet and MOSOP president Ken Saro-Wiwa led mass protests—at one time rallying over 300,000 people. Under his leadership, MOSOP

developed an Ogoni Bill of Rights that demanded environmental justice and op-

“People of color, indigenous people, and poor people bear a disproportionate impact of environmental hazards.”

environmental justice movement prioritizes building community power. Our goal is to solve environmental problems by leveling unequal distributions of power and ensuring that the voices of poor communities and communities of color are heard.

The issue of energy is one of great relevance to indigenous people and people of color who often pay a serious price for the United State's lust for oil. Every aspect of oil production from extraction, to processing, to consumption, exploits indigenous land, destroys the natural environ-

posed the method of allocation of oil funds. Ken Saro-Wiwa was executed because of his work on behalf of the Ogoni People.

MOSOP was eventually successful in driving Shell out of Ogoniland, but oil pipelines still remain. Shell has not cleaned up the destruction, nor have they adequately compensated the people whose land they destroyed.

Closer to Home

In the United States, African-Americans, Latinos, Asian Pacific-Americans, Native Americans, and poor people are adversely

impacted by energy policies. From the oil refineries that line the infamous “Cancer Alley” in Louisiana, to the Hanford Nuclear site in Washington State (now considered the most contaminated area in the Western Hemisphere). American Indian tribes that call the Hanford area their home experience rates for cancer, stillbirths, and birth defects far beyond the national average.

In November 2004, Washington voters took a major stand for environmental justice when they voted for I-297, barring the U.S. Department of Energy from sending more nuclear waste to the Hanford nuclear reservation. The state initiative is now being challenged by the federal government on grounds that it violates federal laws governing nuclear waste and interstate commerce. If the Department of Energy has its way, Hanford will continue to be a dumping ground for radioactive waste.

Our survival, and the survival of every living creature, calls us to take a stand. The time is long overdue for mainstream environmental groups, environmental justice groups, and other movements to work in solidarity for sustainable energy. We are at a pivotal point in history. We must join together to stop the sanctioning of poisonous chemicals in our air, food, and water. We must tackle the ugly realities of institutional racism and classism. Together, we have the power to achieve environmental justice and reshape the direction of our country. ~

The CCEJ will be hosting Owens Wiwa, brother of Ken Saro-Wiwa, on May 7-8. Call (206) 720-0285.

Building Green, Breathing Easy

Marie Marchand

The last place one would think to look for innovative sustainable design is in the public housing sector. Not anymore. Thanks to a ground-breaking venture between Seattle Housing Authority (SHA) and Asthma specialists from the Department of Health and the University of Washington, High Point resident and Asthma

“My hope is that it will be less stressful for us,” shared Fernandez. “It’s frustrating when you clean your house and it’s still dirty. Right now, we live in a house that is old, dusty, and has lead-based paint. So often, cities just throw a place together and move onto another one without thinking: Is it safe? Is it good? Is it earth-friendly?” Diana and her daughter,

along with their roommate—all Asthma sufferers—hope to move into a new Breathe Easy Home this fall.

The Breathe Easy Homes project integrates green building, sustainable neighborhood development, and respiratory health for low-income families in West Seattle. “A long-time resident asked us to address indoor air pollution,”

explained Project Manager Tom Phillips of SHA. “When the project team began their research, they discovered that rates of Asthma are twice as high among low-income people.”

The Difference in Cost

Breathe Easy Homes cost roughly \$5,300 more per unit than the standard SHA units currently being built at High Point. “The homes are stand-alone duplexes so that residents will not have to deal with neighbors who smoke or have furry pets,” said Tom Phillips. The additional costs are mainly attributable to the high-tech, whole-house air filtration system that will keep Asthma allergens to a minimum.

“I’ve lived at High Point for 18 years,” stated Fernandez. “I’m looking forward to a safer, healthier environment all around.”



Marie Marchand is editor of *A Matter of Spirit*.

GREEN FEATURES

- Air Filtration System
- Energy efficient appliances
- Limited carpeting (carpets can house dust mites, odor, and formaldehyde)
- Hydronic Heating System (small hot water heater that heats the home)
- Low-Volatile Organic Compound (VOC) paints that limit off-gassing

sufferer, Diana Fernandez, will be breathing a lot easier.

Warming Hearts Through Wind Energy

Residents in rural Klickitat county are in need of an energy boost. Literally. Seventeen percent of residents currently live below the poverty level. Unemployment reached a 15% high in 2003. Last winter, 150 families who sought help with their heating bills were turned away. For these households in need, a new 300 kW community wind energy project will turn the heat on.

“It’s exciting,” stated Jennifer Grove of Northwest SEED, one of six partner organizations. “Luna Point will be locally-developed, locally-maintained, and all profits will stay within the community.

It’s a true sustainable model.”

Three wind turbines were installed on the site by Bonneville Power Administration and the Department of Energy in the 1980s, but were removed after an initial test phase. Since the land is being recycled from a former energy site, Luna Point will have minimal environmental impact. Moreover, the turbines will produce no waste, helping keep the rural skies clear.

“The unique aspect of Luna Point is that all profits will support a local energy assistance program for low-income families,” remarked Grove. Operation Warm Heart has provided \$85,000 in

energy assistance over the past ten years. Now, revenues from Luna Point will double their ability to serve the community.

“Luna Point is about building a relationship between the local utility and social service agency to foster sustainability,” affirmed Grove.

“It’s a creative approach that links renewable energy’s environmental and social benefits.”



Small-scale wind projects benefit local communities in ways large-scale projects cannot.

100% by 2010

Marie Marchand

Being an employee of the City of Portland means that you know “renewables.” Weekly emails relay green tips on resource efficiency, a portion of your power comes from microturbines, recycling runs rampant, and Global Climate Change is on everyone’s mind. At least this is the hope of Susan Anderson, Director of Portland’s Office of Sustainable Development (OSD).

“It’s been a longstanding desire of the city council—since 1979—that the city play an active role in influencing energy policy,”



stated Anderson. “Many of the actions that affect energy use, such as streets, roads, buildings, and power companies, are related to local government.” This puts the City of Portland in a unique position to make a huge impact.

Portland leads the country in its commitment to renewable energy. In 1993, it developed the nation’s first municipal Global Warming Reduction Strategy. In 2001, it formulated the goal of securing 100% of its energy needs from renewable sources by 2010. The interim goal of achieving 10% by 2003 was met by purchasing green tags, install-

ing microhydro facilities in the drinking water supply, and capturing methane from wastewater with microturbines and fuel cells.

A lot of fancy innovation for a Northwest city of modest means. Yet, Portland reports these greening measures have shaved two million dollars off its annual expenses.

According to Susan Anderson, *now* is the time to realize the goal. “Interest rates are low, the competitive price of wind is falling in relationship to the rising price of natural gas and other electricity generation, and the much needed political support is on board. It can happen in the next year or two.”

When it does happen for Portland, let’s hope that the rest of us won’t be left behind in the dark. ☺

Our Carbon Footprint

Using the CO2 Calculator

A CO2 Calculator measures the amount of carbon equivalent emissions you produce. When you use the calculator on-line, be prepared with the following information (or you will have the option of choosing the national average).

1. Number of cars owned and the average miles driven per week.
2. Miles flown in the past year.
3. Type of housing.
4. Kilowatts of electricity used in the past year.
5. Heat source for your home: natural gas, oil, or propane and the amount used.

Two organizations that provide on-line calculators are Bonneville Environmental Foundation—www.b-e-f.org and National Wildlife Federation—www.nwf.org.

The CO2 Calculator offers an opportunity to reflect on your personal environmental impact and to consider ways that you can mitigate your carbon footprint. One way to do this is to “offset” your energy useage through Green Tags.

What are Green Tags?

Green Tags, also called renewable energy *certificates* or *credits*, are a currency in the energy trade representing the social and environmental benefits of renewable energy. Purchasing Green Tags directly supports the development of new alternative energy such as wind and solar. By offsetting the amount of green house gas emissions produced, Green Tags empower energy consumers to change the mix of electricity sources that make up the grid.

Will I see an immediate change in where my electricity comes from ?

Your power pool will not change immediately, but keep in mind that you will be greening the future mix of your region’s



energy pool. If we use more wind turbines and fewer coal plants, we produce less air pollution and have a far better chance of stabilizing global climate change.

Where can I purchase Green Tags?

Look at your next energy bill for the opportunity to purchase Green Tags, or visit Bonneville Environmental Foundation on-line at www.b-e-f.org or Renewable Choice Energy at www.renewablechoice.com. ☺

Renewable Energy—Northwest Style

Biomass—Plant and animal material including wood, plant waste, and livestock manure can be used to generate electricity, light, heat, motion, and fuel. Converting biomass energy into useable energy recycles waste materials that would normally be dumped and uses up methane, a greenhouse gas. Fuels such as ethanol can be made from biomass and used as an alternative to gasoline in cars.

Efficiency—Efficiency is the cleanest “source.” By using energy-saving appliances and building materials, we lessen the overall demand for electricity.

Geothermal—Geothermal energy uses heat energy from hot springs and geysers. The Pacific Northwest has the potential to

generate up to 11,000 mW of electricity from geothermal power. The most promising sites are southeastern Oregon and along the Cascades in Washington.

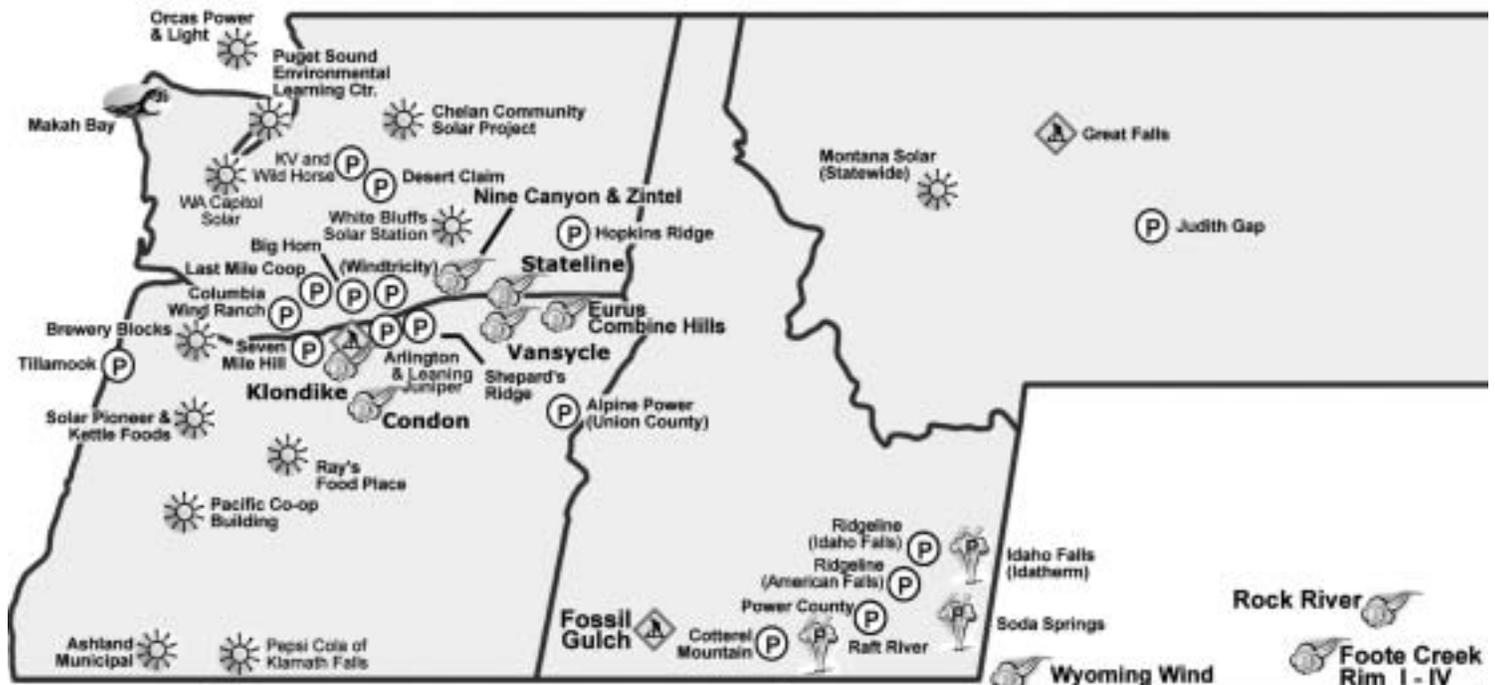
Hydroelectric—Water released from dams can turn turbines to produce electricity. While it does not cause pollution, ecosystems can be destroyed and cultural sites flooded. People and communities oftentimes need to be resettled.

Low-impact hydro—Dam operators who mitigate the presence of their facility to help preserve aquatic life and stream habitat can be certified “low-impact.”

Solar—Solar energy is light and heat energy from the sun that is converted by solar cells into electrical energy, providing clean electricity to the power grid.

There is enough solar radiation striking the surface of the earth to provide for all of our energy needs. Using solar technologies to generate electricity is currently more expensive than using coal-fired power stations, but it produces much less pollution.

Wind—Moving air turns the blades of large windmills to make electricity. A high wind speed is needed to power wind generators effectively. While wind generators do not produce greenhouse gas emissions, they may cause vibrations, noise, and visual pollution. Over the past few years, the danger to birds and bats has been greatly reduced due to proper siting of turbines. At present, wind electricity costs more to produce than electricity generated from coal. 🌬️



Renewable Northwest Project
www.rnp.org

Last Updated 02/01/05

Legend	
	Wind - Operating
	Wind - Construction
	Wind - Proposed / Env Review
	Geothermal
	Wave/Tidal
	Solar



IPJC Needs

- ◆ Airline miles for Convocation Speakers
- ◆ Assistance with yard maintenance
- ◆ Convocation set up and clean up
- ◆ Occasional day time volunteers for mailings
- ◆ Businesses to advertise in our Convocation Booklet—call us if you know of potential contacts

Women's Justice Circles

What are you waiting for?
Join a Circle, Make a Difference!
Call 206-223-1138 or visit www.ipjc.org



Olympia Women's Justice Circle

Bellingham—Sterling Meadows (en español)
512 Sterling Dr—To begin late February
Contact: Erin Corday, 360-734-8134

Everett—Everett Community College
Parks Bldg, Conf Rm B, 2000 Tower Street
Thursdays 6–8 pm, began January 20th
Contact: Therese Quinn, 425-252-6672

Olympia—Evergreen Vista
1209 Fern Street SW
Wednesdays, 6-8 pm, began February 2nd
Contact: Donna Estrada, 360-753-3511

Royal City (en español)
Begins in March
Contact: Rosalinda Aguirre, 206-223-1138

Northwest Catholic Women's Convocation III

April 22-23, 2005

Washington State
Convention and Trade Center

Don't miss this opportunity to gather with thousands of women of faith from the Northwest!

- ✓ Invite a friend
- ✓ Gather women from your parish and school community
- ✓ Ask your pastor; parish staff; and pastoral council to commission and bless a delegation from your church
- ✓ Support a woman who otherwise might not be able to attend

The Convocation is the only gathering of this kind in the country and only happens every four years.

There are just a few more days left to receive the early registration fee of \$95.

After March 1st the cost will be \$120

Call 206.223.1138 or download the registration form at www.ipjc.org



Seattle—Christ the King Parish (en español)
La Casita, 11714 Phinney Ave, N.
Saturdays 1-3 pm, began January 8th
Contact: Leticia Benadiviez Pickett, 206-367-1136

Seattle—Hammond House
2nd & Stewart, for directions call 206-956-1623
Saturdays 2-4pm, began February 19th
Contact: Rosalinda Aguirre, 206-223-1138

Seattle—Casa Latina (en español)
Begins in March
Contact: Rosalinda Aguirre, 206-223-1138

Spokane—Guse Summit View Apartments
820 N Summit Blvd
Wednesdays, 5:30–7:30 pm, to begin in March
Contact: 509-327-9524

Tacoma—Hillside Gardens
1708 South G Street
Tuesdays, 6-8 pm, begins March 8th
Contact: Lillie Byrd, 253-627-5783

Yakima—Saint Joseph Parish (en español)
212 N 4th St—to begin Saturday, March 12th
Contact: Marta Wilson, 509-573-9864

Jubilee Women's Center Circle participants expressed hope and confidence that their words can generate change. In response to hearing their personal stories of homelessness, King County Executive Ron Sims offered encouragement and commitment to being a part of ending homelessness, "If we are to end homelessness, it is vital that the entire community work together." Seattle City Council member Peter Streinbrueck also responded, "Your stories reveal the reality of life for people living or trying to get off the streets."

From Spokane to Mattawa to Wapato to Seattle to Everett, participants said they learned, shared, and created change. "Our voice will always be heard and we are not alone."

peace & justice center

Young Adult Interfaith Justice Series



Young adults discuss similarities between Jewish and Christian social justice traditions (Left). Presenter Rabbi Zari Weiss (center) listens to a small group conversation (below).



Mark your Calendar for the Final Event, Tuesday May 3rd

Zen Buddhism and Justice
with Rev. Genjo Marinello Osho-San

Renewable Energy Benefits Triple Bottom Line

Religious shareholders are working with nineteen companies in four industries—electric power, insurance, energy and automotive—on issues of renewable energy for the preservation of the Earth, its resources and its people. As faith-based investors we are committed to a triple bottom line, one that is social, environmental and financial. It concerns us that companies' pursue sources of energy at a great cost to people and the environment.

NWCRI members have been involved in a dialogue with ChevronTexaco regarding the company's human rights policy. ChevronTexaco has operations in 180 countries, all with different political, social and environmental issues. A strong human rights policy is imperative for a global company called to be responsible by its shareholders and the communities in which it does business.

ChevronTexaco is currently being challenged to take responsibility for the operations of Texaco in the Ecuadorian Amazon, one of the most fragile places on Earth. Between 1971 and 1991, Texaco released 4.3 million gallons per day of toxic oil wastewater into Ecuador's rainforest, contaminating the land and water. This ecological disaster is also a human disaster for the 30,000 indigenous people who live on this toxic land and fish in the polluted rivers.

The story of ChevronTexaco illustrates why religious shareholders are leaders in challenging our companies to develop renewable sources of energy. Our triple bottom line is at stake, and of the three returns we expect—social, environmental, financial—the greatest is the health of our Earth and its people.

Resource: www.amazonwatch.org

Advocacy

Thanks to the hundreds of you who joined us for Church Advocacy in Olympia and Salem.

Olympia: We met with over 100 legislators and staff on many issues including: housing, healthcare, human service, and economic justice.

Salem: We are building a constituency that brings a faith-based perspective to the public square.

Renewable Energy Legislation

- ◆ The *Green Buildings Bill* would require using a green building code called LEED (Leadership in Energy and Environmental Design) for all new school building construction in Washington beginning in the year 2009.
- ◆ The *Clean Car Bill* emanated from the West Coast Governor's Global Warming Initiative and would require all new car purchases in Washington to meet the nation's most stringent auto emission standards.
- ◆ The *Energy Efficiency Bill*, endorsed by the NW Energy Coalition, would set efficiency standards for thirteen frequently purchased product types. If passed, this new law would reduce cumulative CO2 emissions and provide a net value to Washington's economy of \$489 million by 2020.
- ◆ The *Climate Stewardship Act of 2003* would cap the 2010 aggregate emissions level for the covered sectors at the 2000 level. Although it was voted down in 2003, faith groups are attempting to resurrect it.

GLOSSARY OF TERMS

Alternative Energy: Non CO₂e producing energy sources, such as hydrogen fuel cells, that do not deplete natural resources. Nuclear energy is considered "alternative" but is *not* considered "renewable."

Biodiesel Fuel: A cleaner-burning, renewable, and domestically-produced diesel fuel made from natural sources such as vegetable oil.

Carbon Dioxide Equivalent (CO₂e): A single unit of measure that has become a widely used standard to represent green house gases.

The Flow of Energy: Electricity is converted in a transformer, flows to a substation and travels through utility lines into a large power grid. As wind-powered electricity is added to the grid, other generators will be turned down or off to maintain the balance.

Fuel Cells: Function in a manner similar to a battery in that both use an electrochemical conversion process. They typically take in hydrogen and oxygen from the air, then convert them into electricity and heat.

Global Climate Change: The change in average weather over time and over a region.

Global Warming: Human usage of fossil fuels has caused the warming of the global climate over the last 150 years, accompanied by retreating alpine glaciers, rising sea levels, and shifting climate zones.

Green House Gases: The major natural greenhouse gases are water vapour, carbon dioxide, and ozone. Minor greenhouse gases include methane, nitrous oxide, freon and other CFCs.

Kilowatt (kW): One thousand watts of power.

Kyoto Protocol: In 1997, more than 160 nations met in Kyoto, Japan to negotiate binding limitations on greenhouse gases for developed nations. The U.S. signed the Kyoto Protocol, but did not ratify it. The treaty will go into effect on February 16, 2005 for the 55 national that ratified it.

Microhydro: A small-scale power system in which water in a river or stream is used to generate electricity by turning a small turbine.

Microturbine: A small turbine that burns fuel such as natural gas, propane, diesel, ethanol, or biogas to generate electricity.

Photovoltaic Solar Panels: Made primarily of silicon. When the silicon is combined with one or more other materials, it exhibits unique electrical properties in the presence of sunlight.

Renewable Energy: "Clean" electricity from non-fossil fuel sources such as wind, solar, hydroelectric, geothermal, and biomass.

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