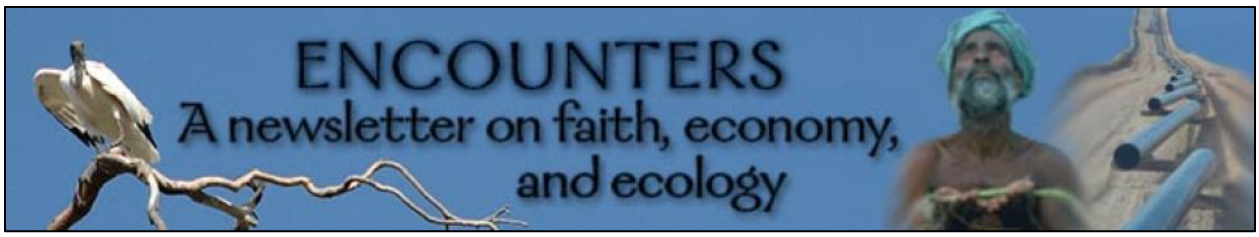


December 2014

In the previous Encounters, we focused exclusively on the rather stark effects that surpassing the point of peak oil will likely have on society.

In this Advent season, a season of hope and preparation for good things to come, we focus on the creative and hopeful strategies that communities and governments are employing to build energy resiliency and independence for a future without cheap oil. From West Virginia to Tanzania, communities are making a difference towards an economy in right relationship with God's Earth and people.

Happy holidays,

The Maryknoll OGC Faith, Economy, Ecology Team

Paradigm shift in mindset and values

Corporate power webinar series

In October and November the Faith Economy Ecology Transformation Working Group hosted four webinars on "A Faithful Response to Corporate Power." **Listen to each week of the series here.**

Faith Economy Ecology Advent Guide

The Faith Economy Ecology Working Group developed a four-week education, reflection, and action guide entitled "Economy of Right Relationship: An Advent Guide for a New Economy."

Download it here.

Public policies for an economy of right relationship

Communities, governments switch to localized alternative energy systems

Creating and strengthening local energy systems that are locally controlled is a key priority for communities preparing for a post-peak oil reality and all around the world we see this happening. The Institute for Local Self-Reliance (ILSR) recently released a report detailing the advantages of local ownership of energy production versus communities using out-of-state (or country) corporations. ILSR also documents a variety of community and state initiatives in local energy systems and other areas where communities are localizing their economies.

Interfaith Power & Light is a "religious response to global warming" that helps congregations of faith to reduce their energy usage and convert to renewable energy systems. Since the year 2000 they have assisted thousands of faith communities to understand their role as stewards of God's Creation. Their website has an excellent compilation of resources on ecology from a faith-based perspective including sample sermons, prayers and other worship resources, study guides for groups, and religious statements on climate change.

The organization Go 100% has identified "eight countries, 46 cities, 52 regions, eight utilities, 21 non-profit/educational/public institutions, totaling more than 48.1 million people (and counting…) who have shifted or are committed to shifting within the next few decades to 100 percent renewable energy in at least one sector (e.g. electricity, transportation, heating/cooling)." Their website provides a wealth of concrete examples of communities uniting to remove fossil fuels from their economies, as well as detailed studies of how different communities could become 100 percent renewable.

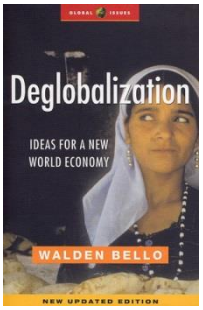
The International Renewable Energy Agency also provides some inspiring case studies of cities "where local governments have successfully adopted measures to promote renewable energy and sustainability."

A collection of civil society organizations in Ireland recently released their Community Energy Policy Position Paper, defining community energy as "a broad term that describes citizen and local ownership and participation in renewable energy generation, distribution and energy efficiency." The paper describes the different barriers that such initiatives face and how government could facilitate the implementation of more community energy projects. As communities in other countries face similar barriers, the paper is helpful beyond the borders of Ireland. Erik Jan van Oosten provides a less technical explanation of the paper looking at the societal, technological and financial aspects of what needs to be done.

The British Columbia Sustainable Energy Association has a good four-part investigation of how the Canadian province could become a 100 percent renewable energy region, considering electricity, building heating and transportation.

Sweden has become a world leader in garbage recycling, currently recycling 99 percent of its garbage. It is so efficient that it has actually run out of garbage and now imports hundreds of thousands of tons of garbage from other countries to be used as a source of energy. But the program is not without its problems. Close to 50 percent of Sweden's trash is burnt in incinerators that have a number of negative environmental effects including the release of dioxins that are especially toxic pollutants. The Global Alliance for Incinerator Alternatives (GAIA) argues that a true zero waste program would not use incinerators, but other options such as extending producer responsibility for their products after their useful life, using clean production techniques to avoid pollution, moving toward circular production systems that create no waste, and comprehensive composting of organic materials. GAIA points to other cities and regions that are implementing true zero waste programs without the use of incinerators.

Strengthening local and national economies through deglobalization



The international NGO Focus on the Global South explains that, "[d]eglobalization is not a synonym for withdrawing from the world economy. It means a process of restructuring the world economic and political system so that the latter builds the capacity of local and national economies instead of degrading it. Deglobalization means the transformation of a global economy from one integrated around the needs of transnational corporations to one integrated around the needs of peoples, nations, and communities."

Rising fuel costs and a failing financial system will quickly make global supply lines increasingly difficult and expensive to maintain. For this reason, it will be important to shift towards a deglobalized economy. Walden Bello has proposed 11 principles to deglobalization and the website Systemic Alternatives provides other articles with similar themes.

Some may feel overwhelmed at the idea of trying to stop the globalized economy, but it is important to remember that the global economy is a very recent phenomenon. Just a few decades ago, very few products were made through global supply chains, and after surpassing peak oil this way of doing business will no longer be economically viable. The sooner a community or country begins to reorient its economy away from dependence on global supply lines, the easier it will be.

Building thriving and resilient communities

Coal towns thriving without coal

Those who are perhaps most affected by replacing coal with alternative energy sources are communities that have long been dependent on coal extraction for their livelihoods such as those in Appalachia and Wales. Yet even in these most heavily affected areas, we see that some communities are able to shift toward more sustainable and equitable local economies. Knowing their stories can provide important lessons for other communities wanting to create similar economies.

The After Coal project has interviewed coal miners and their families in both of these communities since 1974 documenting changes in their lives as they transition away from dependency on coal. The Alliance for Appalachia is a regional alliance working to end mountaintop coal mining and other destructive coal technologies while creating a just and sustainable Appalachia.

In the faith community, the West Virginia Council of Churches is joining with partners to host conversations across the state on how to build resilient local economies in an initiative called *What's Next, West Virginia?*

Laura Flanders with Yes! Magazine has a good in-depth piece on these shifts in Appalachia. As the subtitle suggests, "if it can happen in Appalachia, it can happen anywhere." Part of their strategy is developing young community leaders through their Transition Fellows program – a description of the program with brief bios of the most recent group of inspiring youth is here.

A growing movement of "transition towns" builds resilient, low-carbon economies

Other concrete examples of communities consciously moving toward more sustainable and equitable local economies are those that are involved in the growing Transition Towns network. These are more than 475 communities around the world, though mostly in Europe, Australia and the U.S., organizing to "respond to the twin challenges of peak oil and climate change by decarbonizing and re-localizing the economy through a community-led model of change."

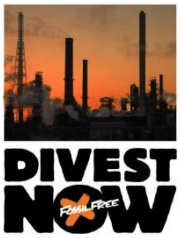
Their website contains a wealth of information about local initiatives in a variety of areas and even has a full-length movie about the network told by members of various transition towns and cities. The Simplicity Institute has an excellent in-depth look at the history and current functioning of the movement with its various successes and failures.

Sustainability writer Jeff Vail suggests that the Tuscany region in central Italy represents "a positive vision of the future—not a reversion to feudal serfdom, but a progression to a more egalitarian and human-compatible life..." The region contains numerous semi-autonomous hamlets that are self-sufficient in many ways but that also specialize in certain products or services that are traded within the region. He describes why this sort of system provides resilience against systemic shocks and permits a limited division of labor that avoids exploitative hierarchies. Ecological writer Lakis Polycarpou gives a less technical description of the region and its social and environmental benefits. Even though the region is more rural than the U.S.

Movement Generation is an interesting and effective movement based in the San Francisco Bay area that works especially with communities of color and low-income communities to "inspire and engage in transformative action towards the liberation and restoration of land, labor, and culture." One of their campaigns is the Our Power campaign that helps communities diminish their reliance on fossil fuels and build "local living economies" with zero waste, public transportation, regional food and water systems, and efficient affordable housing. They also provide "Earth skills" trainings in important areas such as urban composting and soil preparation, rooftop gardening, rainwater harvesting, waterless composting toilets and skills that will help people and communities be more resilient in the future. They also help establish healing clinics for low-income families that provide quality non-industrial, non-pharmaceutical treatment.

Shrinking power and influence of corporations

Fossil fuel divestment campaigns send moral message to corporations



If we are to limit overall global warming to 2 degree Celsius, the International Panel on Climate Change estimates that we can release another 469 billion tons of carbon into the atmosphere. Yet the major fossil fuel companies around the world already have discovered reserves of nearly 3000 billion tons. This means that, to avoid more than a two-degree increase, up to 84 percent of the already discovered reserves must remain in the ground. Even so, according to the Unburnable Carbon report, in 2012 alone, the 200 largest publicly traded fossil fuel companies collectively spent an estimated $674 billion on finding and developing new reserves. Imagine if even a fraction of this amount of money was invested in creating a more sustainable and democratic energy paradigm instead of desperately trying to find more unusable oil and coal.

This is the goal of a rapidly growing divestment/investment movement that is working with large institutional investors to remove fossil fuel corporations from their portfolios and to shift their investments toward conservation and alternative energy endeavors. The number of institutions pledging to divest from fossil fuels has more than doubled from 74 to 181 commitments in the first nine months of 2014 alone. Combined with the 656 individuals who also have committed to divest, the movement represents $50 billion in assets.

Many who divest do so on moral grounds, in fact it is largely faith-based institutions that are leading the way. As Chuck Collins with the Institute for Policy Studies wrote, "Divestment is not primarily simply an economic strategy, but also a moral and political one. If slavery is wrong, is it wrong to make a profit from it? If apartheid is wrong, is it wrong to make a profit from it? If it is wrong to wreck the planet, then it is wrong to profit from it." Wen Stephenson makes a strong comparison between the climate movement today and the slavery abolition movement years ago.

Yet there are also strong economic arguments for divesting. Energy writer Tom Conrad stresses that the sooner you divest the better. As the value of these corporations depends in good part on the value of their untapped reserves, this means that at some point in the not too distant future, there is likely to be a sell off of their stocks as it becomes clearer that they have been overvalued.

Some wonder if the campaign will have much effect as it focuses exclusively on divesting from publicly traded corporations when many fossil fuel companies depend more on funding from private hedge funds. Also, in a clear conflict of interest, the campaign has received large donations from at least two hedge fund managers who “stand to benefit from a successful divestment campaign that only focuses on publicly traded securities.”

While the purely economic effects of the campaign may be negligible, it has had the important effect of creating opportunities within large institutions to discuss climate change. Nathaniel Bullard, director of content for Bloomberg New Energy Finance believes that the campaign may push major institutional investors to reduce the size of their fossil fuel investments. “Big investors in a sense divest all the time but they would call it reallocation,” says Bullard. “A large investor might reweight a portfolio down from 12 percent fossil fuels to 8 or 9 percent.” While some large investors such as Harvard have refused to divest, they have been convinced by activists to invest more in renewable energy. The campaign can also make access to credit more expensive for fossil fuel companies.

Regardless of its economic effects, many investors simply choose to not profit from destroying Earth. Jim Antal, president of the Massachusetts Conference of the United Church of Christ, the first national church to officially divest from fossil fuels, said, “We can’t continue to profit from wrecking God’s creation—not through our pensions, not through our endowments, not by our personal investments. As Jesus said: ‘Where your treasure is, there is your heart also.’”

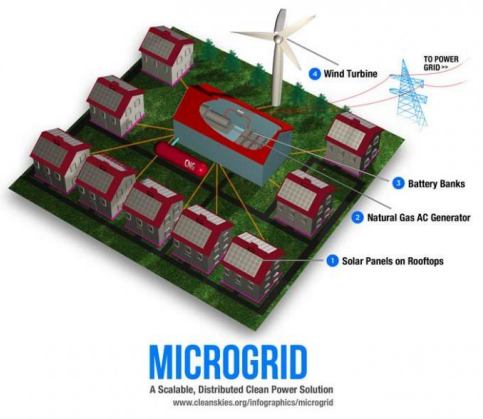
Small-scale renewable energy grids replace mega-utility corporations

Increasing efficiencies in energy storage and transmission combined with falling prices for renewable energy technologies are creating a profound transformation of energy systems around the world. Massive utility companies using fossil fuels are facing increasing competition from small-scale renewable energy producers ranging from farmers to community energy cooperatives. In more industrialized economies, especially the United States, this transformation is important to move away from dependence on fossil fuels and due to the increasing fragility of current energy systems; meanwhile, in less industrialized economies, this transformation is allowing countries to skip over dirty, concentrated systems and move directly to sustainable, distributed energy systems.

The environmental magazine *Ensia* shows that lithium-ion battery prices have fallen by 40 percent since 2010 while solar panels are 80 percent cheaper than five years ago. Wind turbine prices have also fallen up to 35 percent from their 2008 high. With these factors it is increasingly easy and economical to create energy microgrids "that can balance and smooth variations in energy supply; provide services, such as voltage support and frequency regulation, to the conventional grid; and export electricity to the larger grid to make a profit or provide a boost during emergencies. Most notably, it can also keep its operator — whether a university campus, military installation, hospital or other facility — up and running in the event the main grid goes down."

These trends come at a good time because, as Massoud Amin, director of the University of Minnesota's Technological Leadership Institute, shows, the U.S. power grid is in desperate need of renovation. The number of weather-related power outages in the U.S. has increased dramatically. "Between the 1950s and '80s, outages increased from two to five each year; from 2008 to 2012, outages increased to between 70 and 130 per year." These numbers should only increase as climate change brings stronger storms and the grid continues to deteriorate. Besides avoiding larger breakdowns in energy provision, Amin also gives the economic argument in favor of heavy investment in a new, smarter electric grid showing how the $2.96 billion invested through the 2009 American Recovery and Reinvestment Act created 47,000 full-time equivalent jobs and helped accelerate the introduction of new technologies.

These microgrids are already being created in remote areas such as islands that have long depended on expensive fossil fuel imports and facilities that cannot risk losing power such as hospitals, microchip factories and military bases. Ironically, major fossil fuel companies are also creating their own renewable energy microgrids for offshore oil and gas drilling platforms.



Germany is in the process of rapidly transforming its energy system after passing a landmark law, the Renewable Energy Sources Act, in 2000 that "guaranteed renewables a fixed, higher-than-market price for 20 years, and created an emphatic incentive to invest in renewables." It also signaled the end of reliance on nuclear power, a decision reinforced by President Angela Merkel in 2011 after the Fukishima nuclear plant explosion in Japan.

The city of Schwabisch Hall in southwest Germany has radically transformed its energy profile with its complex mix of renewable energy sources. Its municipal utility company manages nearly 3,000 regional energy suppliers from "several thousand solar photovoltaic (PV) installations, two wind parks, one gas-and-steam power station, six small hydro-electric works, three biomass (wood pellet), six biogas plants, and 48 combined heat and power plants, as well as other conventional and renewable energy suppliers outside the municipality. ...

"In just a dozen years, industrial-powerhouse Germany has replaced around 31 percent of its nuclear and fossil fuel generated electricity with green power, produced overwhelmingly… by a dynamic, decentralized patchwork

that includes more than two million small and medium-scale renewables producers -- businesses, villages and towns, co-ops, individuals, green investment funds, and farmers -- whose numbers grow by the month."

These changes represent a profound challenge to traditional energy companies as they face what some have called a "utility death spiral," in which utilities begin to lose customers, forcing them to jack up rates to cover lost revenue, which in turn pushes more people away. The "Big Four" energy utility companies that have dominated Germany's energy production and distribution have been caught largely flat-footed during these changes experiencing record losses that will likely never be recovered. Germany's two biggest utilities, E.On and RWE, have both seen their net income drop by one-third since 2010. "At best," says Berlin-based Paul Hockenos, "the big utilities can postpone the day of their inevitable redundancy unless they move into renewables fast."

In less industrialized countries, this energy system transformation is taking a different tack. "Just as the mobile phone revolution in Africa dramatically reduced the need for telephone landlines, solar power is now leapfrogging the electric grid," writes Tim McDonnell in *Mother Jones* magazine. Globally, 19 percent of people have no access to electricity, but in Africa that number rises to 58 percent, with higher percentages in rural areas. Tanzania, for example, 86 percent of people have no electricity.

Instead of waiting in vain for the construction of large electric grids as in industrialized countries, millions of rural Africans are turning to solar panels, part of "a clean-energy boom that development experts say could become a catalyst for widespread economic empowerment." A 2013 World Bank report found that from 2009 to 2012, "sales of small solar lighting units have nearly doubled each year across the continent, rising to 4.4 million units sold in 2012."

In contrast to focusing on small-scale, distributed energy systems like these that the Institute for Local Self-Reliance has shown to be more beneficial to communities, the Obama administration has launched the Power Africa project that aims to double power generation in Africa within five years through large-scale projects that will create centralized energy systems dependent on outside corporations. The U.S. has pledged seven billion dollars toward the project, though five of the seven billion is not in aid, but for loans to private corporations from the Export-Import Band, Overseas Private Investment Corporation and other government agencies. The project also includes at least $20 billion in commitments from private corporations.

International Business Times writer Jacey Fortin expresses the skepticism of many that Power Africa is not so much about providing sustainable affordable energy to Africans as it is about giving U.S. corporations a hand up in the race to dominate Africa's rapidly growing economies: "Ultimately, Power Africa aims to build lasting partnerships between Western private companies and a continent that happens to have some of the world's fastest-growing economies." She explains further, "General Electric, [which is heavily investing in the project] has been shifting more of its focus to Africa in recent years. The multinational conglomerate stands to benefit heavily from the better access to finance and insurance that Power Africa promises. That approach could help American and other Western companies compete against China's growing influence on the continent, but it might neglect small, innovative projects that could bring power to communities off the grid, which is especially important since rural populations are worse off in terms of electricity access." Indeed, the fact that only $2 million of the multi-billion dollar project is being provided for an "Off-Grid Energy Challenge" that would build the microgrids like those we describe above shows where Power Africa's priorities lie.

The changes described above are occurring not only in the energy sector but also in various sectors of the economy as society moves toward a collaborative economy with many more producers and less economic concentration. The entertainment, communications and publishing industries have already been radically affected by these changes and the effects are rapidly spreading into education, manufacturing and other commercial sectors. Look to the next edition of Encounters for a more in-depth look at the collaborative economy.

ENCOUNTERS is an e-newsletter publication of the Maryknoll Office for Global Concerns' Faith Economy Ecology Program. Each section of ENCOUNTERS focuses on one of the four pillars of the Faith Economy Ecology Transition statement endorsed by more than 80 groups. Read the statement in its entirety here.