Fukushima’s Aftermath

By John Cruickshank, Chair of the Virginia Chapter

March 11 was the two-year anniversary of the earthquake and tsunami that devastated the eastern coast of Honshu Island in Japan. Damage to the Fukushima Daiichi Nuclear Power Plant will have long-term consequences for the nuclear industry worldwide. Just after the earthquake occurred, the three reactors in operation shut down immediately and relied on emergency generators to power the cooling systems and electronics. After the wave struck and flooded the generators, there was no electric power to circulate the coolant water and the reactors quickly overheated. After some delay, the government ordered that the reactors be flooded with seawater. This water boiled away and the water level in the fuel rod pools dropped, causing a meltdown in reactor number one. The intense heat of the meltdown resulted in several hydrogen-air explosions. Radiation was released into the air, seawater, and groundwater. The Japanese government evacuated residents living within 12 miles of the power plant. Many of them have been unable to return to their homes, and some never will. Virginia has two nuclear power stations at Surry, along the James River, and at North Anna in Louisa County. On August 23, 2011 a 5.8 magnitude earthquake in central Virginia caused the automatic shutdown of the North Anna plant. As with Fukushima, the emergency generators were needed to operate the cooling and electrical systems. Some of these generators failed, but enough kept running until regular power was restored. The Virginia Sierra Club and other groups appealed the decision of the Nuclear Regulatory Commission to allow the North Anna reactors to resume operation later in the year. We believe that Dominion Power had not taken all the necessary measures to ensure that these reactors and their spent fuel pools pose no danger to the people living in central Virginia. The U.S. currently has 104 nuclear power plants. Not too long ago industry executives were talking about a nuclear renaissance and hoped to significantly increase that number. Today five new plants are under construction and, at least, that many are slated for permanent closure or are shut down indefinitely over safety issues. Falling natural gas prices, rising construction costs, and safety concerns are turning companies away from this source of energy. Other countries are also having second thoughts about nuclear power. Germany has plans to shut down all their reactors in the next 10 to 15 years. The Sierra Club is opposed to the expansion of nuclear power. Our energy policy states, “nuclear power is not safe, affordable or clean. Mining uranium risks the workers’ health and creates toxic residues. Plant designs are complex, prone to accidents and have severe security vulnerabilities. Nuclear waste transportation, storage, and disposal problems remain unsolved.” The best options for meeting our future energy needs are wind, solar, geothermal, and improved efficiency. (Reprinted with permission from the Spring 2013 Old Dominion Sierran)

Groups Act to Protect Endangered Species from Destructive Coal Mining in Tennessee

Groups Agree that Federal Agencies Violated Endangered Species Act in TN Mining Approvals

Nashville, TN – Today, Defenders of Wildlife, Statewide Organizing for Community eMpowerment (SOCM), Tennessee Clean Water Network (TCWN) and Sierra Club filed a first of its kind suit against the Office of Surface Mining (OSM) and the U.S. Fish and Wildlife Service alleging that the government agencies violated the Endangered Species Act by approving mining permits for the Zeb Mountain and Davis Creek Area 5 surface mines in Tennessee. Sierra Club and its allies argue that OSM and the Service failed to fully consider the effects pollution from mining operations would have on the endangered Cumberland darter and the threatened blackside dace; two fresh water fish found primarily in the areas threatened by mining waste pollution from these sites. Specifically, the groups allege that OSM and the Fish and Wildlife Service have ignored the best science and data available that show how specific forms of mining pollution at these sites endanger the dace and darter.

“Extinction of endangered species is too high a price to pay for surface mining,” said Mary Anne Hitt, Director of Sierra Club’s Beyond Coal Campaign. “The Office of Surface Mining failed in its duty to ensure endangered species were protected when it granted mining permits at Zeb Mountain and Davis Creek. Mining pollution from these sites clearly poses a risk to the dace and darter; these permits should have never been allowed to go forward.”

The groups contend that high levels of water conductivity created by mining pollution put the future of the blackside dace and Cumberland darter at risk. Conductivity is a measure of the ability of fresh water to carry an electric current. The higher the conductivity level in Appalachian streams, the more pollutants are in the water and the greater the threat to certain species of aquatic life. Conductivity is measured in microSiemens per centimeter (µS/cm) with a safe level for the darter and dace being less than 240 µS/cm. However, tests of the water downstream from the Zeb mountaintop removal mine site show conductivity ranging from 538 to 886 µS/cm – far above safe levels for the fish. While Davis Creek Area 5 has not yet begun operations, like all other surface coal mines in Appalachia the new Davis Creek mine is extremely likely to cause conductivity in local streams to exceed levels that are safe for dace. In fact, in 2010 the Environmental Protection Agency reviewed state mining permits in Appalachia and found that none of them took steps to prevent pollution that increases conductivity in streams.

“What is remarkable here is that the Service and OSM have all of the studies showing that high conductivity caused by coal mining harms these fish” said Greg Buppert, staff attorney for Defenders of Wildlife. “They’ve simply been ignoring them for years.”

Further, the groups will argue that reliance on old and outdated science to determine the safety of endangered species at or near mountaintop removal sites is arbitrary and capricious. The Endangered Species Act requires federal agencies to act on the best scientific data available to insure that any action an agency takes is not likely to jeopardize the continued existence of any threatened or endangered species. Currently, OSM and the Service rely primarily on research (continued on page 5)
July 27-28 in Nashville!

TENNESSEE CHAPTER SUMMER MEETING
(same meeting, different set-up)

The Summer statewide meeting of the Tennessee Sierra Club Executive Committee will be held in Nashville on July 27th at 9:00 A.M. at the United Steelworkers’ Building, 3340 Perimeter Hill Drive, Nashville, TN 37211. We will have a hike/outing on Saturday afternoon (July 27th), and a dinner. Jump in where you can!

July 27th – Saturday afternoon hike/outing and dinner – $15
July 28th – Sunday morning breakfast and meeting - $5

(If you booked your room through us at Scarritt Bennett, your total fee for the weekend will be $40 with the dinner and breakfast included).

Please contact Betsy at garberb@hotmail.com (put Sierra Club in the subject line) or (615) 668-1977.

Target Date for September-October Issue is July 25, 2013.

All meetings and outings notices, articles, and photographs should be in by then.

Send material to Gene Van Horn at gvnhorn26@gmail.com
TVAs Supporters for New Mid-Size Solar Energy Systems

TVAs in the United States, will fall behind instead of climbing to 14th in installed solar capacity in 2013 were met in less than four months. An April 24th press release from TVA touts the program as being very successful, but TVA has withdrawn support for valley residents and business who want to invest their own money to go solar and this is contrary to TVAs mission and goals. "Reaching the TVA Green Power Providers program capacity so early in the year has only negative effects on solar businesses and solar clients. This program should be available to TVA customers all year long," adds Ed Zubko, Chief Operations Officer, Green Earth Solar, LLC. "Some of the benefits of the TVA Green Power Providers program to customers are: reduced tax liability, predictable return on investment for the more than 25-year life of the system, saving money on electricity for over 25 years, reduction in the amount of CO2 required to operate a business or residence, support for Tennessee companies with some Tennessee made products available."

Tennessee Chapter Sierra Club Repower America Chair Mary Mastin commented, "It makes no sense for TVA to say it has a cap on how much fuel-cost-free electricity it will buy from folks who pay to have a solar system installed at their home, business or farm. If folks want to dig into their savings to build generation capacity so TVA does not need to borrow money and build power plants and burn coal or uranium we all win. Solar generates air or water pollution, no coal ash, and no danger from radiation and nuclear waste. TVA has withdrawn support for valley residents and business who want to invest their own money to go solar and this is contrary to TVA's mission and goals." The April 24 TVA press release can be found at: http://www.tva.com/news/releases/apr-jun13/2013_renewable.html

I was inspired by my attendance at the Good Jobs Green Jobs (GJGJ) Conference, co-sponsored by the Sierra Club, and recently held in Washington, DC. I am a busy entrepreneur. So, 'how on God's green earth' could I spend three days away from an enterprise that cannot survive without its leader, (at least I thought so) to attend a green jobs good conference? Busy is an understatement, because our company has doubled our volume over the last two years and we have several potential new clients on the hook. Well, I did make the decision to attend, and I wish I had gone years ago! At the conference I got fired up. It was so encouraging to hear presentations from key political figures, the motivating presentation by the Sierra Club Executive Director Michael Brune, and witness the dedication and conviction of persons attending from across the country. I attended several breakout sessions and truly enjoyed each one. But, the session by Neil Seldman President of Institute for Local Self-Reliance was especially rewarding. Neil got everyone fired up with real ideas for opportunities to produce jobs in our communities. This workshop really hit home with me because my company, Doxicom Global, specializes in finding recycling solutions for materials that are difficult to recycle. In talking with Neil one-on-one he agreed to do an article about Doxicom's success in finding recycling solutions for businesses. Also at Neil's session I met Ralph Avelone, Chief Executive Officer and International President of the Green Energy Council. We are in the process of collaborating on several projects. And, overall, the highlight of my trip was meeting so many members of the Sierra Club. I could not believe how committed they are to the cause.

Doxicom has been working with our local NAACP (Jackson, TN) on several projects. One of those being a local environmental justice campaign to stop the permitting of a construction landfill in a rural residential area. The local NAACP president has been "encouraging" me to do more as I am the environmental person known for promoting recycling within the organization. Having returned from the conference I have agreed to develop a plan to finally move our community to recycle more. I am in the process of writing the plan for the NAACP that will be used to encourage all the public facilities to start recycling. We hope this will spread to include citizens in the community as well. Please stay tuned and monitor our progress.

Thanks to the Sierra Club for allowing me to attend the GJGJ conference and get fired up. I now fully understand the need to do more. If we want change it starts with me. I look forward to the next conference and getting involved in environmental justice activities. As a side note, soon after I was invited to attend the conference by the Sierra Club Environmental Justice Program in Memphis, I joined the Sierra Club, and I do plan to become involved locally. Anyone interested in touring our facility should contact Rita Harris at rita.harris@sierrachlb.org to arrange a group field trip. For more about Doxicom Global, please visit greengooroo.com * doxicom.co * greengoorooonline.com
The public is very welcome at ALL Sierra Club Meeting and Activities! All members traveling to the area should feel free to drop in and attend another Group’s meetings. You will find yourself among friends and learning something interesting.

CHEROKEE GROUP (Chattanooga)
Picnic/Cookout July 8, at Davis Mounger’s house: Bring a covered dish or something to share, some of us might be ready for a relaxed fun evening at Davis’ house, 212 Greenleaf St., Red Bank. We’ll also be viewing the short movie from 350.org, “Do The Math.” Bring friends! For directions, check out our Facebook page. Cherokee Sierra or e-mail Davis at wdmonger@yahoo.com. (This replaces our Strategy meeting for July.)

July Program: Last Monday, July 29, 7:00 P.M. at Outdoor Chattanooga, Coolidge Park, 200 River Street, Chattanooga. Topic: Alaska’s Arctic National Wildlife Refuge. John David will present a short video and discuss the compelling reasons why the Club has works to protect the pristine wilderness of the Refuge -- petitioning Congress to protect the coastal plain as wilderness and blocking numero- nous attempts to open the refuge to oil and gas development. Come see the beauty and grandeur of this special place. Bring your friends along!

The public is very welcome and healthy snacks are served — bring something along to share if you’d like. Parking is free along the side-walks in Coolidge Park, or paid parking in the Theatre lot. Bring your friends!! Be sure to let them know we’re meeting now on the Northshore.

Strategy Meeting: August 12 (Board Meeting) 2nd Monday, 6:00 P.M.
Our Strategy Meeting is held downtown, at Second Presbyterian Church, located at the corner of E. 7th Street and Pine, next to the old Blue Cross (orange) building. All members of the Group and interested people are welcome -- this is where/when we plan our actions, come add your ideas and share your concerns. To place on item on the agenda, contact Secretary Barbara Kelly at 423-718-5009 or bk1rivers@comcast.net, preferably a week before our meeting.

The public is very welcome and healthy snacks are served — bring something along to share if you’d like. Parking is free along the side-walks in Coolidge Park, or paid parking in the Theatre lot. Bring your friends!! Be sure to let them know we’re meeting now on the Northshore.

THURSDAY, August 1, 5:30 P.M. to 7:00 P.M. Monthly First Thursday Gathering Other Hands Coffee Bar, 641 S. Cooper, Memphis, TN
Sierra Club members, activists, and friends meet in a casual setting to talk about environmental issues and interests. For more information contact Susan Routon at susan.routon@gmail.com or (901) 413-3888.

TUESDAY, August 13, 6:30 P.M. Executive Committee Strategy Meeting Contact Sue A. Williams for location information
A strategy meeting that is open to all members. To place an item on the agenda -- or for current location -- contact Chairperson Sue A. Williams at (901) 274-0524 or zclcmv@juno.com at least five days before the meeting.

PROGRAM 6:00 P.M. Program, 5:30 P.M. refreshments and social time. Benjamin L. Hooks Central Library, 3030 Poplar Avenue, Memphis
Thursday, Sept 5, 5:30 P.M. to 7:00 P.M.
Monthly First Thursday Gathering Other Hands Coffee Bar, 641 S. Cooper, Memphis, TN
Sierra Club members, activists, and friends meet in a casual setting to talk about environmental issues and interests. For more information contact Susan Routon at susan.routon@gmail.com or (901) 413-3888.

NOTE: Sierra Club Chickasaw Group is now on Facebook.
For more details, additional events, and updates, see our website and Facebook page.

PROGRAM PREVIEW: September 12
Don Safer, nuclear activist and Tennessee Environmental Council Board Chairman, will dis- cuss nuclear issues and clean energy.

THREE S N Group Picnic Holston River Park, 3200 Holston Hills Road, Knoxville: All Sierra Club members, families and friends are invited to this annual event. This year we are doing it …

The HBG will provide a grill and burgers (veggie and meat). Please contact Mac Post (mpost3116@aol.com) so that we will have enough on hand and to find out what you might contribute to the potluck (salad, fruit/vegetable, etc., and of course dessert).

HARBOR Executive Committee meetings are held the 4th Tuesday of each month at the Tennessee Valley Unitarian Universalist Church, 2931 Kingston Pike, Knoxville, TN. All HBG meetings are free and open to the public.

MIDDLE TENNESSEE GROUP (Nashville)
PROGRAM: July 11, 7:00 P.M. at Radnor Lake Visitor Center – NashvilleWAVe. Jennifer Carlat of Metro Nashville Planning will visit MTG to discuss NashvilleNext and to do a visioning exercise with the Sierra Club. NashvilleNext is a comprehensive, integrated plan for the future of Nashville intended to ensure the prosperity and well-being of our city and region for the next 25 years. It incorporates the arts, environment, transportation, diversity, livable communities, public safety and more. It’s a plan on a scale that has never been undertaken before, based on the open and transparent interchange of ideas with our residents. Share your ideas for the future of Nashville on www.talk.nashvillenext.net and learn more at www.nashvillenext.net.

MTG needs a new Program Chair or Co-Chair starting in January. This is a responsibility that lies at the heart of what we do in bringing the community together in support of the environment. We have a current committee member who is willing to co-chair, but she would step aside for someone who wants to chair the committee solo. The responsibilities take about 4 hours per month, plus attendance, as possible, at the pro- grams on the second Thursday of each month. At least 2, and maybe more, of the current commit- tee members are willing to stay on, so it would not be a “starting from scratch” effort. Please contact Adele Wood, 665-1010 or adelleintn@juno.com for further details. Fun vol- unteer job!

WATAUGA GROUP (Northeastern TN)
PROGRAM: July 11, 7:00 P.M. at 1239 Sixth Ave. North, Nashville – from residents to business and prop- erty owners to commuting workers to city leaders -- as well as experts in a variety of issues important to our city’s growth, we will talk about art and culture, economic development, education, environment, transportation, diversity, livable communities, public safety and more. It’s a plan on a scale that has never been undertaken before, based on the open and transparent interchange of ideas with our residents. Share your ideas for the future of Nashville on www.talk.nashvillenext.net and learn more at www.nashvillenext.net.

PROGRAM: July 19, 6:00 P.M. 7:00 P.M.
CARLAT of Metro Nashville Planning will visit MTG to discuss NashvilleNext and to do a visioning exercise with the Sierra Club. NashvilleNext is a comprehensive, integrated plan for the future of Nashville intended to ensure the prosperity and well-being of our city and region for the next 25 years. It incorporates the arts, environment, transportation, diversity, livable communities, public safety and more. It’s a plan on a scale that has never been undertaken before, based on the open and transparent interchange of ideas with our residents. Share your ideas for the future of Nashville on www.talk.nashvillenext.net and learn more at www.nashvillenext.net.

PROGRAM: Friday, August 16, 6:00 P.M. to 8:00 P.M.
Betsy 668-1977 or garberbh@hotmail.com. Come a bit early because we start the meeting at 6:30, and please contact Betsy at 668-1977 to let her know you’re coming.

PROGRAM: September 10

Nashville – from residents to business and prop- erty owners to commuting workers to city leaders -- as well as experts in a variety of issues important to our city’s growth, we will talk about art and culture, economic development, education, environment, transportation, diversity, livable communities, public safety and more. It’s a plan on a scale that has never been undertaken before, based on the open and transparent interchange of ideas with our residents. Share your ideas for the future of Nashville on www.talk.nashvillenext.net and learn more at www.nashvillenext.net.

REVING exercise with the Sierra Club. NashvilleNext is a comprehensive, integrated plan for the future of Nashville intended to ensure the prosperity and well-being of our city and region for the next 25 years. It incorporates the arts, environment, transportation, diversity, livable communities, public safety and more. It’s a plan on a scale that has never been undertaken before, based on the open and transparent interchange of ideas with our residents. Share your ideas for the future of Nashville on www.talk.nashvillenext.net and learn more at www.nashvillenext.net.

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The current trends in air pollution in the park and the entire Appalachian Trail, will stay entirely in the stretch on the paved trail to the Clingmans Dome. For more information, contact Emily Davis at emdavis@comcast.net. Please check our Facebook page, Cherokee Sierras, for the latest on our outings during the summer months.

John Muir Trail and Davis Mounger’s home: Bring a covered dish or something to share, something to grill and BYOB for a relaxed fun evening at Davis' home, 212 Greenleaf St., Red Bank. We’ll also be screening 350.org’s short movie, “Do The Math.” Bring friends! For directions, check out our Facebook page, Cherokee Sierras or e-mail Davis at wdmounger@yahoo.com. (This replaces our Strategy meeting for July.)

CHICKASAW GROUP (MEMPHIS)

Check our webpage and Facebook for additional outings and updates.

HARVEY BROOME GROUP (Knoxville)

6-7 Jul (Sat-Sun). Backpack, John Muir Trail, Big South Fork National River and Recreation Area. One of the best hiking-only trails in the entire Big South Fork NRA is the John Muir Trail and on this backpack we’ll be hiking the trail from Leatherwood Ford to Station Camp, a distance of about 15.1 miles (9.5 miles on Saturday to a creek side campsite and 5.6 miles on Sunday). Features include the famous Angel Falls Overlook (in the past year or so a featured Hike-of-the-Month in the Knoxville News Sentinel) plus spring wildflowers and numerous views of the Big South Fork River and the cliffs and rock houses for which the Park is famous. We’ll learn about the history of the Big South Fork along the way. Mileage and some significant up and down elevation gain, plus a wet crossing of the Big South Fork river at the end, causes us to rate this hike one-way drive: 73 miles. Preregister with Will Shelton: H 523-2272; Cell 72-7327; whshome@bellsouth.net.

14 Jul (Sun). Take-a-Hike, Obed Wild & Scenic River Segment, Cumberland Trail. After meeting at the Obed WRH at 8am, we carpool to the trailhead at Nemo Bridge on the Obed/Emero River. The first part of our hike follows the Cumberland Trail north along the gorge of the Emory River. This stretch of trail is extremely scenic, yet is almost never used because it dead-ends at 1 mile. It will eventually be extended to Wartrace. After our roundtrip, we will cross the Obed/Emero on the Nemo Bridge and hike south on the Cumberland Trail along the Obed River 2.5 miles to Alley Ford or as far as participants care to go. Rated easy to moderate. One-way drive: 45 miles. Preregister with Will Shelton: H 523-2272; Cell 72-7327; whshome@bellsouth.net.

20 Jul (Sat). Take-a-Hike, Biodiversity tour (Spruce-Fir), AT from Clingmans Dome to Mount Collins, GSMNP. Hike distance is 4.5 miles, rated easy (once you go the short but steep stretch up the paved trail to the Clingmans Dome tower. From this highest point of the park, and the entire Appalachian Trail, will stay entirely in the Spruce-Fir zone of the Smokies. We will stop by the air-quality monitoring station and discuss the current trends in air pollution in the park and impacts on ecosystems. There will be a short car shuttle involved. One-way drive: 80 miles. Preregister with Mac Post at 865-806-0980 or mpost3116@aol.com (e-mail preferred).

GROUPS ACT TO PROTECT ENDANGERED SPECIES FROM DESTRUCTIVE COAL MINING IN TENNESSEE

“Strip mining in Tennessee has polluted our waters to the point that native fish like blackside dace and Cumberland darters are barely holding on,” said TCWN Attorney Stephanie Matheny.

“Our mountain watersheds and aquatic ecosystems are precious resources that need to be protected for future generation,” said Rita Chadwell, Sierra Club member. “They are something for our communities and region to be proud of... I take pride in knowing that Davis Creek, which runs in front of my home, is special and provides a unique habitat for sensitive and rare species like the blackside dace. Davis Creek has suffered enough pollution from mining and should be left alone so the blackside dace populace can recover and my community can have a safe body of water for recreation.”

The litigation was filed with the U.S. District Court for the Middle District of Tennessee. Defenders of Wildlife, SOCM, TCWN and Sierra Club, are represented in this action by Greg Buppert from Defenders of Wildlife and Stephanie Matheny of Tennessee Clean Water Network.

--Lauren Randall, Communications Assistant, Sierra Club, 202-495-3027 lauren.randall@sierraclub.org

Ten Essentials for Hiking

Sierra Club outings offer a variety of wilderness and near wilderness experiences. It is important to realize that while all trips are guided by a leader, it is ultimately the responsibility of the individual to operate in a safe manner. To this end, the following is a list of essential items which should be modified according to the particular type of outing. These are:

1. Adequate map
2. First aid kit
3. Compass
4. Rain gear
5. Extra clothing (it is a good idea to always have a wool hat)
6. Matches
7. Knife
8. Flashlight
9. Extra food, water
10. The tenth essential: You decide what is the most important thing to bring!

Groups Act to Protect Endangered Species from Destructive Coal Mining in Tennessee

(continued from page 1) completed in 1996. At that time, the effects of conductivity on fresh water fish were unknown. Empirical studies undertaken since then show a strong correlation between elevated conductivity and harm to blackside dace and Cumberland darters. Because the agencies did not take that information under consideration, the groups contend not only there a clear violation of the Endangered Species Act, but populations of these two species are at risk of being wiped out.

“Species like the dace and darters are totally vulnerable to destructive human activity in their watersheds, but can do nothing about it,” said Cathie Bird, a member of Statewide Organizing for Community Empowerment. “The very least we humans can do is to demand that permitting agencies start with the best science available, then continually update their assessments of potential harm as new data comes along.”

Mountaintop removal and other forms of surface mining have already caused a significant decrease in the dace and darter populations.

Mountaintop removal is an extremely destructive form of coal mining. Mines clear-cut timber and undergrowth, blast open the earth, and destroy streams. This devastating practice poisons drinking water, lays waste to wildlife habitat, increases risk of flooding, and wipes out entire communities. Mountaintop removal operations frequently contaminate local water sources. They release toxic pollutants such as selenium and heavy metals.

Communities nearby mountaintop removal mines experience elevated rates of serious health problems such as cancer and birth defects.

Addition that Senators Alexander and Corker are introducing to the U.S. Congress. Total hike distance is 6.6 miles and a bit more technical than other Take-a-Hikes with some rocky scrambles, less frequent trail maintenance, and 2 over the knee-deep stream crossings. Rated moderate. One-way drive: 60 miles. Preregister with Mac Post at 865-806-0980 or mpost3116@aol.com (e-mail preferred).

MIDDLE TENNESSEE GROUP (NASHVILLE)

For a list of current MTG outings, please go to our MEETUP PAGE: http://www.meetup.com/MiddleTennessee-Tenessine/
Nuclear Power Talking Points

Updated 3/14/2011

- Our hearts go out to the people of Japan in this time of unspeakable tragedy and unimaginable chaos.
- As the aftermath of the massive quake continues to unfold, the debate about nuclear power has been reignited in America and around the world. Nukes are not the answer.
- The Sierra Club is unequivocally opposed to nuclear energy. Nukes are unnecessarily costly, dirty, and unsafe.
- Government favoritism for nukes by way of subsidies, loan guarantees and liability caps have enabled the nuclear power industry to exist. There are cleaner, cheaper, better ways to generate electricity – that wouldn’t commit our children, grandchildren, great grandchildren and generations to come to storing toxic, highly volatile nuclear waste at their peril – and for tens of thousands of years.
- We can have a clean and healthy world without nuclear power, and meet our energy needs through energy efficiency and renewable, clean and safe energy.
- Clean energy solutions like wind and solar are transforming our energy system. These solutions are powering economies around the world, and right here in America, right now. We have the technology, we just need the political will to make a clean energy future a reality.
- Portugal currently gets 45% of its electricity from renewable energy. If Portugal can do it, we can do it.
- Today is already at 20% wind power, proving that it’s possible for us to greatly increase the amount of energy we get from renewable sources.
- Texas has more than 10GW of installed wind power already – enough to power 2 million homes.
- This is America – when history demanded it, we rose to the occasion – putting a man on the moon, curing diseases, creating advances. We already have the technology to solve these problems – we need to have the political will to think big and implement clean energy solutions on a very large scale.

Background Information (from 2009):

- Nuclear power is not a responsible choice and makes no sense as part of America’s clean energy future. Generating electricity from nuclear sources poses at least four insurmountable problems:

1. **Production of highly dangerous radioactive waste** - Nuclear waste remains dangerous to humans for 200 thousand years, and we don’t know what to do with this waste once it is generated. We are no closer to a permanent solution to the waste today than we were 30 years ago.

   Every nuclear reactor generates about 20 tons of highly radioactive spent nuclear fuel and additional low-level radioactive waste per day. The waste can kill at high doses and cause cancer and birth defects at low doses. Nuclear waste remains dangerous to humans for 200 thousand years.

   "Worse, we don’t know what to do with this waste once it is generated. Some propose dumping nuclear waste in Yucca Mountain, NV; however, the mountain is seismically active. An earthquake in the 1990’s caused over $1 million damage to a Department of Energy (DOE) facility at the site. In addition, a DOE panel of scientists has found that the nuclear material may leak from the containment vessels over time and will contaminate groundwater. On its way to Yucca Mountain, the waste would pass through thousands of cities and towns and present multiple exposure risks. Yucca Mountain was due to open in 1998, if fully approved today it would not open until 2021 at the earliest. We are no closer to a permanent solution to the waste today than we were 30 years ago.

2. **Prohibitively high costs** - Nuclear power is the most expensive way ever devised to generate electricity. The industry has cost taxpayers $66 billion in research and development subsidies.

   Nuclear power is the most expensive way ever devised to generate electricity. The method is not anywhere near cost effective, nuclear plants in the states of Oregon, New York, Maine, Illinois, and Connecticut have been shut down because the owners found it was too expensive to keep them going.

   American taxpayers are subsidizing the nuclear industry. According to the Congressional Research Service, the industry has cost taxpayers $66 billion in research and development subsidies. When no private insurer would underwrite the risks inherent to a nuclear plant, Congress passed the Price-Anderson law, which provides billions in taxpayer subsidized insurance. While this insurance protects the insurance industry, it offers no guarantee that victims of a nuclear accident would be fully compensated because the law’s compensation limit is far below the amount of damage that a serious nuclear incident could cause.

3. **Danger of accidents** - An accident at a coal plant is a problem. An accident at a nuclear plant can be a disaster; anyone exposed to radiation leaks or accidents will likely sicken or die from that exposure. Cleanup costs will be in the billions.

   An accident at a coal plant is a problem. An accident at a nuclear plant can be a disaster. Because human beings operate plants and drive the trucks that transport nuclear waste, accidents can and will happen. The danger with nuclear power is that the stakes in accidents are extremely high. Anyone exposed to radiation leaks or accidents will likely sicken or die from that exposure. Cleanup costs will be in the billions. Public Citizen has found that more than 90 percent of the country’s reactors have been in violation of government safety regulations during the last three years, potentially increasing the risk of accidents.

4. **Proliferation, the risk that nuclear material will fall into the wrong hands** - Nuclear energy creates increased national security concerns. The more nuclear reactors, the more risk of radioactive material being stolen to make bombs.

   Financing the development of a new generation of reactors – at taxpayer expense – will allow the industry to promote them abroad, including to many developing countries that do not currently employ nuclear power and where the commitment to proper oversight and safety would be questionable at best.

See our fact sheet entitled “The Basics of Nuclear Power.”

**If you have media-related questions, contact:** Media Team, Grassroots Media Coordinator: (741) 977-5761 mediateam@sierrclub.org

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**Statements on Coal’s Future**

**POLITICAL LEADERS**

**Governor Christine Gregoire, Washington**

“Coal power was a part of our past. Our prosperity now depends on our ability to move forward with a clean energy future.”

The Olympian, 4/30/2011

**Senator Robert Byrd, West Virginia**

“The future of coal and indeed of our total energy picture lies in change and innovation. In fact, the future of American industrial power and our economic ability to compete globally depends on our ability to advance energy technology. The greatest threats to the future of coal do not come from possible constraints on mountaintop removal mining or other environmental regulations, but rather from rigid mindsets.”

West Virginia MetroNews, 12/3/2009

**Senator Harry Reid, Nevada:**

“Every year we spend hundreds of millions of dollars buying coal from other states to burn in Nevada. It’s time to make a different choice – a choice that brings new clean energy industries and jobs to Nevada.”

8 News Now (KLAS-TV Las Vegas), 8/7/2012

**Mayor Lee Leffingwell, Austin, TX:**

“The global energy market is changing and we need to change with it. Right now wind prices are competitive with fossil fuels, and that is critical.”

StateImpact, 11/17/11

**INVESTORS**

**Deutsche Bank:**

“Coal is a dead man walking: Banks won’t finance them. Insurance companies won’t insure them. The EPA is coming after them. ... And the economics to make it clean don’t work.”

Kevin Parker, global head of asset management and executive committee member in The Washington Post, 1/11/2011

"This [coal] industry’s dead for now.”

Jim Cramer, Host of CNBC’s “Mad Money” on CNBC, 2/1/2010

**UTILITY COMPANIES**

**American Electric Power**

“We will continue to use what we have available to us, the trend is towards the use of natural gas ... I can tell you there will not be any new coal plants built, with the current price of gas and the forecast for the future for gas, but existing units that have scrubbers will operate for decades to come.”

Nick Akins, President and CEO, in The Boone Examiner, 02/07/2012

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**CNBC, 2/1/2010**
Climate Change and the Carbon Squeeze

By Dick Ball from the Old Dominion Sierran

After a long, costly drought across much of our continent and the devastation of hurricane Sandy, climate change is once again in the news. Climate scientists are cautious about attributing individual extreme events to global climate change, but a broader consensus deems climate change is indeed occurring, predicted to make droughts, floods, and severe storms more intense.

The rate of sea level rise will increase due to warming the oceans and melting glaciers. Oceans will become more acidic, threatening marine life—a condition known as ocean acidification.

Will the recognition that these effects are occurring motivate humans towards action to mitigate or at least plan to adapt to climate change? We need to understand the magnitude of the challenge the world faces if we want to avoid the worst impacts.

The Carbon Budget Squeeze

Carbon dioxide (CO2) is the most important greenhouse gas contributing to global warming. CO2 is also the sole cause of ocean acidification. Since it tends to remain in the atmosphere for centuries, the problems would not disappear quickly if CO2 emissions were eliminated. International negotiations toward a climate treaty have adopted a target to keep the total increase of global mean temperature to no more than 2ºC (about 1.2ºC higher than it has already increased) to avoid the most serious climate impacts. The Potsdam Institute estimates if the world is to have a 50-50 chance of keeping below that 2ºC limit we have to limit CO2 emissions to no more than another 1,100 billion metric tons (Gt) of CO2 between 2010 and 2050—a “carbon budget.”

To improve the odds to an 80 percent chance of keeping within 2ºC, the carbon emission budget shrinks to only 565 Gt. Corporations and governments now have 2,795 Gt in their reserves, more than five times the 565 Gt budget. (That doesn’t count unconventional resources such as tar sands and oil shales.)

Even the 2ºC limit is controversial. Climate scientist Jim Hansen argues we already have too much CO2 in the atmosphere to be safe. Other scientists point out that 2ºC probably would lead to the warmest Earth has been for millions of years. In any case the 2ºC limit is not a magic number but it provides a benchmark against which to understand the scope of the problem. Whatever the exact target or budget, it appears we can only solve the climate problem by leaving most of the carbon reserves in the ground.

How Much Time Do We Have To Act?

In order to grasp what the 1,100 Gt carbon budget implies, it is useful to cast the situation in terms of hypothetical emission paths that would keep within that budget. Figure 1 shows a projected global path if no action is taken—the “No Controls” path—of global CO2 emissions (based on extending U.S. EIA projections beyond 2035 to 2050). That path uses up the total 565 Gt CO2 budget in about 16 years and the 1,100 Gt budget in about 26 years with fossil fuel emissions alone. Also shown are two hypothetical emission paths that would keep us within the higher carbon budget of 1,100 Gt (the budget that gives 50-50 chance of staying within the 2ºC limit). The Path “2020 Peak” assumes emissions start to slow down around 2018, reach a peak in the year 2020, and then rapidly but smoothly begin to decrease. In contrast the “2030 Peak” Path assumes we continue on the uncontrolled path until just before the year 2030 and then begin more rapid cuts to keep us within the 1,100 Gt budget, essentially phasing out all CO2 emissions by 2050. The lesson is: the longer we wait to get started, the more drastic the reductions will have to be.

The big issue is how to get the world moving quickly to achieve the necessary carbon reductions. How can we rapidly reduce fossil fuel use, deforestation, and other sources of carbon dioxide and other greenhouse gases—the climate “mitigation” issue? If we solve that problem, we also will prevent the worst levels of ocean acidification.

Meanwhile, since some degree of climate change is already occurring and will get worse before we can get greenhouse gases under control, we also need to be concerned with making our human systems and natural resources more resilient against climate impacts—the climate “adaptation” issue. We plan to discuss methods for mitigation and adaptation in future articles. What do you think environmentalists can and should be doing? (Reprinted with permission from the Spring 2013 Old Dominion Sierran)
Introduction to Jonathan Levenshus: Beyond Coal Campaign Representative

One of my first meetings as a policy aide for U.S. Congresswoman Lois Capps was with Sierra Club advocates to discuss the Bush Administration’s plans to expand oil drilling off California’s Central Coast. As a new Capitol Hill aide, I remember being impressed by the Sierra Club advocates’ expertise on the issues and passion for environmental protection. We worked together for years to prevent this harmful development in our oceans.

Thirty years later I now have the privilege of working alongside these committed individuals in a new capacity, as the Senior Campaign Representative for the Sierra Club’s Beyond Coal Campaign in Tennessee.

Earlier this year my wife, two daughters and I moved to Knoxville where my wife is a new assistant professor in the School of Advertising and Public Relations at the University of Tennessee. When we made the decision to move to Knoxville, we were living in a Capitol Hill townhouse. We dreamed aloud about the opportunity to move to a region where we could introduce our daughters to mountains, lakes, rivers, forests – and a backyard of their own.

The move also gave me the opportunity to shift my career after spending more than a decade working in Congress. Over the years I held many positions on the Congresswoman’s staff, including Legislative Director and Deputy Chief of Staff. But through it all, I served as her principal counselor for environmental protection and clean energy policy. I also advised her work on the Energy & Commerce and Natural Resources Committees, where I helped to draft legislation related to climate change, renewable energy and coastal protection.

While I loved my job, I was eager for the chance to put my skills to work on the ground. That is why I was excited to accept the Beyond Coal Campaign position. I have always respected and appreciated the Sierra Club’s ability to take on conservation challenges and come up with unique, winnable solutions. I am eager to build on that record of accomplishment here in Tennessee.

My role as the Senior Campaign Representative is to plan and implement the Beyond Coal Campaign in the state. This Campaign is a nationwide grassroots effort to eliminate coal’s contribution to global warming by 2030 and replace the existing coal infrastructure with a clean energy economy fueled by efficiency and renewable power.

I am fortunate that I will be joined by the Tennessee Chapter’s smart, dedicated volunteers and activists in this Campaign. In my first month on the job, I have been impressed by the foundation that has been laid for eliminating dirty and expensive energy sources in the Tennessee Valley. I also look forward to collaborating and coordinating efforts for cleaner, smarter energy policies for families and businesses in our communities.

I have several goals for my work in Tennessee. First, we must continue pushing for the retirement of TVA’s coal-fired power plants, including the Gallatin and Allen facilities. TVA plans to spend billions of dollars to keep these outdated plants running for decades to come. But Gallatin and Allen are some of the biggest toxic polluters in the country. Letting them run into the future means more air and water pollution will be spewed in our environment every year.

That’s wrong. And, it’s why we must replace these and other dirty power plants with energy efficiency and clean renewable energy sources. Pressuring TVA to invest in clean energy will protect the health of our families, lower energy bills, create high-paying jobs, and provide new economic opportunities in our region.

We’ll also continue working to end destructive mountain top removal coal mining in Tennessee. There is tremendous potential in moving coal-field communities toward more sustainable economies, and that will be part of our Campaign’s focus in the year ahead.

There are other issues that we will have to tackle in addition to these goals. I’m ready for the challenge. I know that you are, too.

Even my 4-year-old daughter apparently wants to help. She tells random people at the park or grocery store that her daddy’s job is to “stop the pollution.” While I laugh every time she says it, I’m honored to be doing work that is helping to make Tennessee communities better places to live, work, and even play.

I look forward to working with you in the weeks and months ahead in pursuit of these important efforts.

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