

# THE POLLUTION PATH: FRACKED GAS EXPORTS AT COVE POINT WOULD HARM MARYLAND

The growth of hydraulic fracturing, or “fracking,” has spread rapidly across parts of the United States, and gas companies are now rushing to export it to make top dollar. Virginia-based Dominion Resources wants to spend \$3.8 billion to transform the largely dormant Cove Point liquefied natural gas (LNG) import terminal in Lusby, MD into an industrial export complex. Through a web of pipelines, processing plants and tankers, Cove Point would send gas fracked from the Marcellus Shale area of Appalachia to international customers in India and Japan.<sup>1</sup>

## NEGATIVE NATIONAL ECONOMIC IMPACT AND NON-LOCAL JOBS:

- × While Dominion claims jobs will be created from this expansion, most of these will be short-term construction jobs filled by non-local workers. Many of the estimated 130 permanent jobs<sup>2</sup> will likely be filled by highly technical workers from overseas.
- × The U.S. Department of Energy<sup>3</sup> concluded that LNG exports would raise domestic gas prices and thus harm every sector of the U.S. economy except the gas industry, which will profit enormously. Sectors harmed: agriculture, transportation, services, manufacturing, wage earners, and others. In fact, a coalition of chemical, plastics, and steel manufacturers, and other commodities companies called America’s Energy Advantage, Inc. has filed letters opposing LNG export projects<sup>4</sup>, citing anticipated rising costs for American-made goods.



## DISRUPTIVE INFRASTRUCTURE:

- × To support the export of LNG on the east coast, new pipelines will be needed throughout the Marcellus Shale states to transport gas from new drilling wells to the export terminal. Pipelines, which inevitably leak and rupture causing dangerous explosions and fires, would snake across our waterways, backyards and farms.
- × Noisy, polluting compressor stations could be required from Fairfax, Virginia to Frederick, Maryland and everywhere in between to keep gas moving through the pipelines. Residents of the rural Frederick Co. town of Myersville are already fighting a 16,000-horsepower gas compressor station that Dominion wants to construct a mile from the town’s elementary school. Dominion would need compressors like this throughout the region to meet the proposed export capacity of Cove Point.



## HARMING THE CHESAPEAKE BAY ECONOMY AND ECOLOGY:

- × LNG exports would draw a surge of 90 additional 1,000-foot-long tankers into the Chesapeake Bay each year. In addition to carrying volatile, potentially explosive liquid fuel, these tankers would worsen local air quality and dump billions of gallons<sup>5</sup> of dirty ballast wastewater into the nearby Atlantic waters and fragile Bay each year.<sup>6</sup>
- × The industrial build-out at Cove Point would also require the clearing of forests<sup>7</sup> and threaten the network of rivers and wetlands that attract tourists and support rare species of plants, animals and migratory birds.

## INCREASING THE DEMAND FOR FRACKING:

- × If approved, the Cove Point export facility would provide a strong economic incentive for companies to expand fracking across our region, including in Maryland, where no drilling has yet occurred. In other states, the expansion of fracking has caused drinking water contamination, air pollution, illnesses and even earthquakes.

## DANGEROUS AIR POLLUTION AND CLIMATE CHANGE:

- × Astonishingly, Cove Point’s proposed new onsite liquefaction facility would require a utility-scale power plant (130 MW), compressors, and storage tanks that would emit additional air pollutants like nitrogen oxides and volatile organic compounds<sup>8</sup>, adding ozone pollution to an area of Maryland already struggling to meet health-protective federal air pollution standards.
- × Given the energy-intensive process of extracting, transporting, and processing gas for export, Cove Point could trigger more greenhouse gas emissions than any other single source of climate pollution in Maryland. Over 22 million additional tons of heat-trapping greenhouse gases could be released if Cove Point moves forward as proposed – an amount equal to all of the emissions of Maryland’s coal-fired power plants combined.<sup>9</sup>

# THE CLEAN ENERGY PATH: 40% RENEWABLE ELECTRICITY FOR MD BY 2025

## Instead of Gas Exports, Let's Double Down on Real Clean Power Here at Home

Given the dangers associated with climate-polluting fossil fuel facilities like Cove Point, it is critical that Maryland and federal leaders choose a cleaner path for our energy future. As a bold first step, we urge the Maryland General Assembly to double our state's commitment to clean power by adopting an achievable goal of 40% clean electricity by 2025.

### CLIMATE CHANGE REQUIRES STRONG ACTION

From sea level rise alone, Maryland is the 4<sup>th</sup> most vulnerable state in America to global warming. Yet, nearly 60% of our state's electricity comes from carbon-spewing fossil fuel power plants. With rising temperatures and rising seas, our dependence on fossil fuels is hitting Marylanders hard.

- ✓ In 2011 and 2012, severe weather events cost Maryland taxpayers over \$70 million.<sup>10</sup>
- ✓ Droughts and heat waves have increasingly impacted Maryland farms.
- ✓ Vulnerable populations such as the elderly, children, and the poor suffer the most from extreme weather.
- ✓ The Cove Point facility's pipelines, piers and docking facilities are also extremely vulnerable to sea level rise and extreme weather, as referenced in the latest federal and state regulatory filings.

### A STRONGER CLEAN ENERGY LAW = A STRONGER MARYLAND

Maryland already has an important clean electricity law on the books – the Renewable Portfolio Standard – and it's time to strengthen it. Currently, Maryland has embraced a commitment to 20% clean electricity – from sources like wind and solar -- by 2022. But given the growing threat of climate change to our family farms, the well-being of our children, the health of the Chesapeake Bay, and the stability of our economy, it's time to aim higher. This is what 40% clean power will mean for Maryland:

- ✓ **Jobs for Marylanders** – over 2,000 jobs<sup>11</sup> per year would be supported in Maryland.
- ✓ **Public health savings** – Reduced health impacts caused by burning fossil fuels for electricity, which currently cost the average Maryland household almost \$73 per month.<sup>12</sup>
- ✓ **Less climate pollution** – This law would incentivize nearly 5,000 megawatts of clean energy in our region, which is the carbon equivalent of taking 1.4 million cars off the road every year.<sup>13</sup>

### MARYLAND HAS THE TOOLS - WE JUST NEED THE POLITICAL WILL

Governor Martin O'Malley's visionary Climate Action Plan of 2013 already calls for future expansion of our clean electricity goals, and in March 2013, Minnesota's House of Representatives passed a 40% clean standard. We know we can get to 40% clean electricity for Maryland by 2025. Here's why:

- ✓ **Untapped potential** – The estimated potential for untapped wind and solar power within Maryland's borders is equivalent to ten times the total electricity Marylanders consume today.<sup>14</sup>
- ✓ **Costs are falling** – Costs of solar and wind are plummeting. Solar costs have gone down 80% since 2008, and 20% in 2012 alone.<sup>15</sup>
- ✓ **Proven Success** – Many other states and countries are already on track to achieve more than 40% clean electricity. Ireland's goal is 43% clean power by 2020, and Maine's is 40% by 2017.

Please join us as we urge Maryland's lawmakers to make 40% clean electricity by 2025 a reality in Maryland. Our state can and should lead the charge in the much-needed transition from dirty, dangerous fossil fuels to clean renewable power that's safer and healthier for Maryland families, our environment and our economy.



Visit [www.chesapeakeclimate.org/maryland](http://www.chesapeakeclimate.org/maryland)  
for more information about these efforts.



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- <sup>1</sup> "Dominion Cove Point Liquefaction Project Moving Forward, Cements Front-Runner Status" Dominion News, 1 Apr. 2013.
- <sup>2</sup> Table 5-22 of Dominion's 2013 Maryland Public Service Commission (PSC) *Certificate for Public Convenience and Necessity Application*, Resource Report 5 - Socioeconomics
- <sup>3</sup> Macroeconomic Impacts of LNG Exports from the United States, NERA Economic Consulting (Dec. 2012)
- <sup>4</sup> "America's Energy Advantage." *Blog – compiles formal and informal statements and letters from America's Energy Advantage opposing LNG exports* - <http://www.americasenergyadvantage.org/blog>
- <sup>5</sup> Dominion Cove Point LNG, LP ("DCP") 2013 FERC *Certificate of Public Convenience and Necessity Application*, Resource Report 2, pages 2-24.
- <sup>6</sup> Dominion Cove Point LNG, LP ("DCP") 2013 Federal Energy Regulatory Commission (FERC) *Certificate of Public Convenience and Necessity Application*, Resource Report 9, pages 9-45; Based on (Typical mid-size 138,000 m<sup>3</sup> LNG carriers transporting about 65,115 tons of LNG, or 3.1 bcf of natural gas per voyage [Chandra, Vivek. *Fundamentals of Natural Gas: An International Perspective*. Tulsa, OK: PennWell, 2006. Page 60.] – Cove Point has applied to export 5.75 million metric tons of LNG per year.
- <sup>7</sup> Appendix A-1 of Dominion's 2013 Maryland PSC *Certificate for Public Convenience and Necessity Application*, Environmental Summary, pages. 7, 8.
- <sup>8</sup> Dominion's 2013 Maryland PSC *Certificate for Public Convenience and Necessity Application*, Resource Report 9 - Air & Noise Quality.
- <sup>9</sup> Based on a lifecycle analysis of LNG that includes a range of leakage rates from a low of 1.4% (U.S. Environmental Protection Agency. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2011*. Rep. no. EPA 430-R-13-001. 12 Apr. 2013.) to a high of 7.9% (Howarth, Robert W., Renee Santoro, and Anthony Ingraffea. "Methane and the Greenhouse-gas Footprint of Natural Gas from Shale Formations: A Letter." *Climate Change* 106 (2011): 679-90.) as well as export-related emissions from liquefaction (Table 9-18 of Dominion's 2013 Maryland PSC *Certificate for Public Convenience and Necessity Application*, Resource Report 9 - Air & Noise Quality), tanker transport, and re-gasification. (Jaramillo,, Paulina, W. M. Griffin, and H. S. Matthews. "Comparative Life Cycle Carbon Emissions of LNG Versus Coal and Gas for Electricity Generation." *Environmental Science & Technology* 17th ser. 1.41 (2007): 6290-296.) The lifecycle greenhouse intensity from coal was derived by modifying a Worldwatch Institute study (Worldwatch Institute. *Comparing Lifecycle Greenhouse Gas Emissions from Natural Gas and Coal*. 25 Aug. 2011.) to scale up the upstream coal methane emissions from a 100-year time frame to a 20-year timeframe.
- <sup>10</sup> Browner, Carol M. "The Importance of Maryland's Leadership on Climate Change." *Baltimore Sun*, 18 Aug. 2013
- <sup>11</sup> Based on a doubled solar carve-out, which would necessitate the construction of over 1,000 MW of Maryland solar, and hitting the Governor's goal of developing 690 MW of land-based wind in Maryland. Calculated using DOE's Jobs and Economic Development Indicator (JEDI) model.
- <sup>12</sup> The Office of Governor Martin O'Malley. "Offshore Wind for Maryland." *Maryland Governor Martin O'Malley: Offshore Wind*. – "Recent data from the National Academy of Sciences (NAS) suggest that health impacts caused by burning fossil fuels for electricity cost the average Maryland household almost \$73 per month, creating a drag on Maryland's economy."
- <sup>13</sup> In 2025, Maryland's electricity consumption is estimated to be approximately 69,400,000 MWh (based on the Maryland Public Service Commission's compounded annual growth rate for electricity consumption in Maryland of 0.76% from their ten-year plan (2012-2021). Doubling the RPS would mean that an extra twenty percent of that energy would come from renewable sources, or an extra 14,000,000 MWh. Assuming this all comes from wind, that would necessitate the construction of nearly 5,300 MW of wind capacity (assuming 30% capacity factor).
- <sup>14</sup> Based on Maryland's [2010 electricity consumption](#) of 65,355,000 MWh from the U.S. Energy Information Administration and our and our technical [wind](#) potential (4,269,290 MWh – NREL's table that lists the estimates of windy land area with a gross capacity of 30% and greater at an 80-meter (m) height and the wind energy potential from development of the "available" windy land area after exclusions. [http://www.windpoweringamerica.gov/windmaps/resource\\_potential.asp](http://www.windpoweringamerica.gov/windmaps/resource_potential.asp)) and [solar](#) generation potential (692,350,000 MWh - Lopez, Anthony, Billy Roberts, Donna Heimiller, Nate Blair, and Gian Porro. *U.S. Renewable Energy Technical Potentials: A GIS-Based Analysis*. Tech. no. NREL/TP-6A20-51946. N.p.: National Renewable Energy Laboratory) as calculated by NREL.
- <sup>15</sup> Bloomberg New Energy Finance presentation to the Clean Energy Ministerial in Delhi, India on April 17, 2013.