

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF DELAWARE**

IN THE MATTER OF APPLICATION OF)
DELMARVA POWER AND LIGHT)
COMPANY INTEGRATED RESOURCE) PSC DOCKET NO. 10-2
PLAN FOR 2010 (FILED ON)
DECEMBER 1, 2010))

**PUBLIC COMMENTS
OF
THE SIERRA CLUB, DELAWARE CHAPTER
ON
DELMARVA POWER & LIGHT COMPANY'S
2010 INTREGRATED RESOURCE PLAN**

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The Delaware Chapter of the Sierra Club (Sierra Club) is a non-profit environmental protection organization which, among other things, seeks to educate the public in the State of Delaware about energy issues and advocate for environmentally sound energy policies. Sierra Club strives to promote an environmentally sustainable economy in the Delaware. Specifically, Sierra Club and its members are concerned about the environmental and human health implications of power generation within the State of Delaware.

Delaware law mandates that Delmarva Power & Light Company (DPL) as a standard offer service provider is required to conduct and generate an Integrated Resource Plan (“IRP”). 26 *Del. C.* § 1007(c)(1). In turn, the Commission’s IRP Regulations, 26 *Del. Admin. Code* 3010, set forth the minimum requirements for DPL’s IRP. A key new requirement of the IRP Regulations is the consideration of environmental benefits and externalities. *See* §§ 5.2 (requiring DPL to evaluate all reasonable resource option “including consideration of environmental benefits and externalities”); § 6.1.4 (requiring current evaluation of specific methods of energy production “detailing and giving consideration to environmental benefits and externalities associated with” the methods).

On December 1, 2010, DPL submitted its 2010 Integrated Resource Plan (2010 IRP). Sierra Club’s comments are focused on the externalities analysis in the 2010 IRP. Sierra Club believes it is important for the Commission to do three things in connection with the externalities analysis:

- (1) Recognize that DPL has determined a benefit of \$1.8 to \$4.3 billion will accrue over the 10 year time horizon of the 2010 IRP in the Recommended Case that DPL proposes to pursue because of DPL’s decreasing use of fossil fuels and increasing use of alternative and renewable energy sources;

- (2) Recognize that this estimate is likely a minimum, both because the calculations appear to ignore additional benefits and because alternate mixes of power supplies could generate greater benefits; and
- (3) Require consideration of externalities concerns and environmental benefits in the implementation of the 2010 IRP and future IRPs.

I. THE COMMISSION SHOULD RECOGNIZE THE ENVIRONMENTAL BENEFITS OF DPL'S INCREASING USE OF RENEWABLE ENERGY SOURCES

The Sierra Club believes that the focus on environmental benefits and externalities mandated by §§ 5.2 and 6.1.4 of the Commission's Regulations is appropriate and important to any exercise in resource planning. As noted in DNREC's Public Comments on Delmarva's 2008 IRP:¹

Consideration of externalities in an IRP provides for a mix of resource options that reflect the State's demonstrated interest in promoting sustainable energy practices, protecting the health of its citizens, and reducing the adverse impacts of energy generation on the air quality and climate of the State. DNREC believes that analyzing externalities is an essential element of the integrated resource planning process that results in a more robust planning process that fully explores the options and impacts of meeting the energy needs of Delmarva customers.

By analyzing the true social, health, environmental and/or welfare costs or benefits of particular sources of energy production and use, both the Commission and the public have a much more complete understanding of the true costs of particular energy sources and mixes that DPL might utilize.

Pursuant to these regulatory requirements, DPL did engage in an externality analysis that is set forth in Appendix 6 to the 2010 IRP. Focusing solely on PM_{2.5} and ozone, DPL estimates that the monetary value of the externalities reduced (that is, the economic benefit of rising out of

¹ DNREC Public Comments filed with PSC on May 14, 2009, PSC Docket No. 07-20, available at http://dep.sc.delaware.gov/electric/dplirp/dnrecomments_051409.pdf.

the use of the proposed mix of energy sources in the 2010 IRP’s reference case) is in the range of \$1.8 – 4.3 billion. The breakdown of these monetized benefits is summarized in the following table (which was presented at the April 11, 2011 workshop by DPL):

	Delaware	
2010 - 2020	High End	Low End
PM-Mortality (Laden, 3% discount rate)	3,900	----
PM-Mortality (Pope, 7% discount rate)	----	1,400
PM-Morbidity	86	86
Ozone-Mortality (Levy)	350	350
Ozone-Morbidity	6	6
Total	4,342	1,842
Total (Two Significant Figures)	4,300	1,800

As noted by the entries in the table and explained more fully in Appendix 6, these savings result from decreased mortality and morbidity from the reduced emission of PM_{2.5} and ozone that will occur as a result of DPL’s increasing use of alternative energy sources as required under the RPS requirements of Delaware law. In short, the 2010 IRP clearly establishes that reducing the use of fossil fuels, especially coal, and increasing the use of renewable sources, such as onshore and offshore wind and solar, will result in lives saved and fewer illnesses, creating significant economic benefits to the people of the State of Delaware.

The Sierra Club believes that it is important for the Commission to recognize these benefits arising out of the increased use of renewable energy by DPL. Such findings are consistent with the regulatory requirements for capturing and analyzing environmental benefits

and externalities, and provide tangible proof that the externality analysis required by the Commission will help inform Delaware's public and its policy makers of the real benefits that result from shifting from fossil fuels to renewable energy sources.

At the same time, while the Sierra Club applauds the efforts of DPL to calculate the value of the externalities that will be reduced as a result of the referenced plans shift away from fossil fuels, the Sierra Club urges the Commission to view these estimates as *bare minimums* because of the limited nature of DPL's calculation. DPL has really only looked at 3 pollutants: PM_{2.5}, ozone, and carbon, and only provided detailed calculations for PM_{2.5} and ozone. But certainly other pollutants that create externalities are emitted as a result of coal-fired power generation, and the existence of those externalities, and the savings resulting from a shift away from coal-fired power, should be included in Delmarva's analysis. For example, mercury is a toxic pollutant that is emitted from coal-fired power plants. Data is certainly available to perform such analysis. For example, a recent Harvard study, "Full Cost Accounting for the Life cycle of Coal," published in the *Annals of the New York Academy of Sciences*, see <http://online.library.wiley.com/doi/10.1111/j.1749-6632.2010.05890.x/abstract>, includes externalities not considered by DPL. Delmarva's failure to consider the externalities saved from reduced emissions of mercury is but one example of how the externalities analysis in the 2010 IRP should be viewed as only a minimum.

The Sierra Club urges the Commission to require DPL to prepare more complete externalities analyses and focus on other known pollutants from coal-fired power generation in order to make clear the full extent of externalities caused by reliance on coal-fired power generation and the benefits that can be and will be saved shifting the mix of power sources away

from coal-fired power generation. In this regard, the Sierra Club requests that the Commission do the following:

1. require DPL to provide a more complete picture of the externalities, including expected current effects calculated on an annual basis and effects after 2020;
2. require DPL to look at steps that could further increase future savings of externality costs; and
3. require DPL to establish a protocol to track public health effects related to air emissions from energy generators in order to measure whether the externality benefits are being realized.

II. THE COMMISSION SHOULD MAKE EXTERNALITIES A CENTRAL PART OF DELMARVA'S DECISION-MAKING PROCESS.

While the Sierra Club is pleased that the Commission modified its regulations to require the consideration of externalities in the Integrated Resource Planning process, the recognition of the true cost of power generation via quantifying externalities has little effect if externalities do not play a role in the implementation of an IRP and the decision-making process that Delmarva uses on a day to day basis.

Section 8.1 of the IRP Regulations requires DPL to submit an Implementation Plan, which is defined in § 2.0 as “an action plan which outlines the short and long term planned actions and contingency plan of the Company to secure necessary energy, capacity, transmission and other appropriate resources as further described in the Integrated Resource Plan.” Sierra Club respectfully suggests that implementation of any IRP must be done with environmental benefits and externalities playing a central role in DPL decision-making processes.

In light of the powerful information made available by quantifying externalities the Sierra Club respectfully suggests that the way to make externalities be a relevant part of IRP implementation would be for the Commission to require the following:

1. require DPL to report significant (>5% deviations) deviations from the generation mix specified in the IRP reference case;

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing PUBLIC COMMENTS OF THE SIERRA CLUB, DELAWARE CHAPTER ON DELMARVA POWER & LIGHT COMPANY'S 2010 INTEGRATED RESOURCE PLAN has been served upon the following via email:

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