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September 17, 2010

Potomac Electric Power Company
701 Ninth Street, NW
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Ladies and Gentlemen:

I am Senior Vice President and General Counsel of Potomac Electric Power Company, a District of Columbia and Virginia corporation (the “Company”), and have acted as counsel to the Company in connection with the filing by the Company of the Registration Statement on Form S-3 (the “Registration Statement”) under the Securities Act of 1933, as amended (the “Act”), with the Securities and Exchange Commission (the “Commission”) to which this opinion is attached as an exhibit. The Registration Statement is for the registration of debt securities of the Company consisting of (i) senior notes, (ii) first mortgage bonds and (iii) other debt securities. The senior notes, first mortgage bonds and other debt securities are referred to herein collectively as the “Offered Securities.” The Offered Securities being registered under the Registration Statement will be offered on a continuous or delayed basis pursuant to Rule 415 under the Act. The senior notes (the “Senior Notes”) will be issued pursuant to the Indenture, dated November 17, 2003 (the “Senior Note Indenture”), between the Company and The Bank of New York Mellon, as trustee (the “Senior Note Indenture Trustee”), which is incorporated by reference as an exhibit to the Registration Statement. The first mortgage bonds (“First Mortgage Bonds”) will be issued pursuant to the Mortgage and Deed of Trust dated July 1, 1936, between the Company and The Bank of New York Mellon, as trustee (as successor in such capacity to The Riggs National Bank of Washington, D.C.) (the “Mortgage Trustee”), as heretofore supplemented and amended (the “Mortgage”), which is incorporated by reference as an exhibit to the Registration Statement. The other debt securities (“Other Debt Securities”) will be issued pursuant to the Indenture dated July 28, 1989 (the “Note Indenture”), between the Company and The Bank of New York Mellon, as trustee (the “Note Indenture Trustee”), which is incorporated by reference as an exhibit to the Registration Statement.

In connection with this opinion, I or my representatives have examined originals, or copies certified or otherwise identified to my or their satisfaction, of such instruments, certificates, records and documents, and have reviewed such questions of law, as I or they have deemed necessary or appropriate for purposes of this opinion. In such examination, I or my

representatives have assumed the genuineness of all signatures, the authenticity of all documents submitted to me or them as originals, the conformity to the original documents of all documents submitted to me or them as copies and the authenticity of the originals of such latter documents. As to any facts material to my opinion, I have relied upon the aforesaid instruments, certificates, records and documents, inquiries of the Company's representatives and information obtained from public officials and other sources I believe to be responsible.

Based upon the foregoing and assuming that (i) the Registration Statement and any required post-effective amendments thereto have all become effective under the Act and comply with all applicable laws at the time the Offered Securities are offered and sold as contemplated by the Registration Statement; (ii) a prospectus supplement and any pricing supplement will have been prepared, delivered and filed with the Commission describing the Offered Securities offered thereby and will comply with all applicable laws; and (iii) all Offered Securities will be offered and sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement and the appropriate prospectus supplement and any pricing supplement, I am of the opinion that:

1. With respect to the Senior Notes, assuming (a) the Company has taken all necessary corporate action to authorize and approve the form, terms, execution and delivery of the Senior Notes and the terms of the offer and sale thereof, (b) the Senior Note Indenture has been duly qualified under the Trust Indenture Act of 1939, as amended (the "1939 Act"), (c) the Senior Notes have been duly executed by the Company and authenticated by the Senior Note Indenture Trustee in accordance with the provisions of the Senior Note Indenture and have been duly issued and delivered against payment of the consideration therefor in accordance with such corporate action and as contemplated in the Registration Statement and the prospectus supplement and any pricing supplement setting forth the terms of the Senior Notes and the plan of distribution, (d) any legally required consents, approvals, authorizations and other orders of the Commission and other regulatory authorities have been obtained and (e) the Senior Notes as issued and delivered comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any agreement or instrument to which the Company is a party or by which it is bound or any court or other governmental or regulatory body having jurisdiction over the Company or otherwise, then, upon the happening of such events, the Senior Notes will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other laws of general applicability relating to or affecting creditors' rights and to general equity principles.
2. With respect to the First Mortgage Bonds, assuming (a) the Company has taken all necessary corporate action to authorize and approve the form, terms, execution and delivery of the First Mortgage Bonds and the terms of the offer and sale thereof, including the authorization of an appropriate indenture supplemental to the Mortgage providing for the creation of such First Mortgage Bonds, (b) the Mortgage and the above mentioned supplemental indenture is duly qualified under the 1939 Act, (c) the First Mortgage Bonds have been duly executed by the Company and authenticated by

the Mortgage Trustee in accordance with the provisions of the Mortgage and the above mentioned supplemental indenture and have been duly issued and delivered against payment of the consideration therefor in accordance with such corporate action and as contemplated in the Registration Statement and the prospectus supplement and any pricing supplement setting forth the terms of the First Mortgage Bonds and the plan of distribution, (d) any legally required consents, approvals, authorizations and other orders of the Commission and other regulatory authorities have been obtained and (e) the First Mortgage Bonds as issued and delivered comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any agreement or instrument to which the Company is a party or by which it is bound or any court or other governmental or regulatory body having jurisdiction over the Company or otherwise, then, upon the happening of such events, the First Mortgage Bonds will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other laws of general applicability relating to or affecting creditors' rights and to general equity principles.

3. With respect to the Other Debt Securities, assuming (a) the Company has taken all necessary corporate action to authorize and approve the form, terms, execution and delivery of the Other Debt Securities and the terms of the offer and sale thereof, (b) the Note Indenture is duly qualified under the 1939 Act, and (c) the Other Debt Securities have been duly executed by the Company and authenticated by the Note Indenture Trustee in accordance with the provisions of the Note Indenture and have been duly issued and delivered against payment of the consideration therefor in accordance with such corporate action and as contemplated in the Registration Statement and the prospectus supplement and any pricing supplement setting forth the terms of the Other Debt Securities and the plan of distribution, (d) any legally required consents, approvals, authorizations and other orders of the Commission and other regulatory authorities have been obtained and (e) the Other Debt Securities as issued and delivered comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any agreement or instrument to which the Company is a party or by which it is bound or any court or other governmental or regulatory body having jurisdiction over the Company or otherwise, then, upon the happening of such events, the Other Debt Securities will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other laws of general applicability relating to or affecting creditors' rights and to general equity principles.

I hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the use of my name under the caption "Legal Matters" therein and in the related prospectus, and in any supplement thereto or amendments thereof. My consent to such reference does not constitute a consent under Section 7 of the Act, and in consenting to such reference I have not certified any part of the Registration Statement and do not otherwise come within the

Potomac Electric Power Company

September 17, 2010

Page 4

categories of persons whose consent is required under Section 7 or under the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ KIRK J. EMGE

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