STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

NORTHEAST UTILITIES SERVICE COMPANY APPLICATION TO THE CONNECTICUT SITING COUNCIL FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED ("CERTIFICATE") FOR THE CONSTRUCTION OF A NEW 345-KV ELECTRIC TRANSMISSION LINE FACILITY AND ASSOCIATED FACILITIES BETWEEN SCOVILL ROCK SWITCHING STATION IN MIDDLETOWN AND NORWALK SUBSTATION IN NORWALK, INCLUDING THE RECONSTRUCTION OF PORTIONS OF EXISTING 115-KV AND 345-KV ELECTRIC TRANSMISSION LINES, THE CONSTRUCTION OF BESECK SWITCHING STATION IN WALLINGFORD, EAST DEVON SUBSTATION IN MILFORD, AND SINGER SUBSTATION IN BRIDGEPORT, MODIFICATIONS AT SCOVILL ROCK SWITCHING STATION AND NORWALK SUBSTATION, AND THE RECONFIGURATION OF CERTAIN INTERCONNECTIONS

DOCKET NO. 272

FEBRUARY 15, 2005

PROCEDURAL MOTION OF THE TOWN OF WALLINGFORD.

INTRODUCTION

On behalf of the Town of Wallingford ("Wallingford") the undersigned requests that the Council:

(1) Rescind its wholly new EMF Best Management Practices (the "Wholly New BMP") dated December 21, 2004, for the additional reason that it was adopted by the Council without notice and opportunity for all parties to participate in violation of Conn. Gen. Stat. Section 4-181 (a) and (c);[1] and

(2) Dismiss the Application in this proceeding, by reason of the failure of The Connecticut Light and Power Company and The United Illuminating Company (collectively the "Applicants") to: (A) provide to the Council the required proof that no protected facilities ("Facilities") designated in the Act encroach into the proposed rights-of-way; (B) provide to the Council both the baseline preconstruction EMF measurements required by the Vintage 1993 BMP in effect at the time the Application was filed with the Council, and preconstruction EMF calculations required by the Wholly New BMP; and (C) provide substantive and

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1/ By Motion ("January 2005 Motion") dated January 10, 2005, which motion is still pending before the Council, Wallingford asserted: (1) that the Wholly New BMP violates P.A. 04-246 (the "Act") by providing dramatically reduced protection to the public from exposure to EMF than the Council's prior Best Management Practices (the "Vintage 1993 BMP"); and (2) that the Wholly New BMP was improperly adopted by the Council without any consultation from statutorily designated and other critically impacted stakeholders, including the participants in Docket 272; and that for those reasons the Wholly New BMP should be rescinded. This Procedural Motion adopts and supplements the factual and legal assertions in the January 2005 Motion as if fully set out herein, and also asserts on behalf of Wallingford this additional ground for the rescission of the Wholly New BMP.

detailed environmental information necessary for the Council to make specific findings required under the Public Utility Environmental Standards Act ("PUESA").

I. THE COUNCIL MUST RESCIND ITS WHOLLY NEW BMP

By Motion dated July 23, 2004 (the "July 2004 Motion"), Wallingford requested that the Council, inter alia, update the Vintage 1993 BMP and apply the updated Vintage 1993 BMP to its consideration of the transmission facilities at issue in this proceeding.[2] As discussed in the July 2004 Motion, the Vintage BMP must be updated in order for the Council to make the findings required by the Act.[3]

As discussed in the January 2005 Motion, the Council issued the Wholly New BMP, which were voted on and approved at a Council meeting held December 21, 2004.[4] Wallingford and other parties and intervenors in this proceeding were afforded no opportunity to participate in the Council's consideration and adoption of the Wholly New BMP.

On February 3, 2005, the undersigned Counsel for Wallingford obtained from the General Assembly's Energy and Technology Committee, the Council's

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[2] The July 2004 Motion also requested that the Council reverse its Decisions in Docket 217 and consolidate its review of the transmission facilities reviewed in Docket 217, with the transmission facilities under review in this proceeding. The updated BMP would thus be applied to all of the aforesaid transmission facilities.

[3] See, July 2004 Motion at page 11.

[4] See, January 2005 Motion at page 2.

statutorily – required report ("Council Report") on its adoption of the Wholly New BMP. Pursuant to Section 12 of the Act, the Council Report must contain the Council's most recent version of its BMP, together with "a description of the methodology used in selecting such standards." With respect to the latter requirement, the Council Report states that "[t]he Council received verbal remarks from the energy industry and their requests have been included." (Copy attached as Appendix A.)

The receipt by the Council of "verbal remarks from the energy industry" contravenes Conn. Gen. Stat. § 4-181(a) and (c). Those provisions state in pertinent part, respectively:

> Unless required for the disposition of ex parte matters authorized by law, no hearing officer or member of an agency who, in a contested case, is to render a final decision or to make a proposed final decision *shall communicate, directly or indirectly, in connection with any issue of fact, with any person or party, or, in connection with any issue of law, with any party or the party's representative, without notice and opportunity for all parties to participate*. (Emphasis added)
>
> and:
>
> Unless required for the disposition of ex parte matters authorized by law, no party or intervenor in a contested case, no other agency, and no person who has a direct or indirect interest in the outcome of the case, shall communicate, directly or indirectly, in connection with any issue in that case, with a hearing officer or any member of the agency, or with any employee or agent of the agency assigned to assist the hearing officer or members of the agency in such case, *without notice and opportunity for all parties to participate in the communication*. (emphasis added)

The issue of how the Council must address EMF concerns in its review of the transmission facilities proposed in this proceeding is perhaps the single most important issue in this proceeding, as demonstrated by the legislature's 2004 passage of the Act, which the legislature made explicitly applicable to this proceeding.[5] The Act requires the Council to update its BMP and apply the updated BMP in this proceeding.[6] Section 3 of the Act provides:

> The council shall not grant a certificate, either as proposed or as modified by the council, unless it shall find and determine:...(4) in the case of an electric transmission line...(C) that the overhead portions, if any, of the facility...are consistent with the purposes of this chapter, with such regulations or standards as the council may adopt pursuant to [subsection (a) of] section 16-50t, including, but not limited to, the council's best management practices for electric and magnetic fields for electric transmission lines.
>
> (Emphasis Added).

Thus, the Council must apply its best management practices for electric and magnetic fields to the Application *and* determine that the Application comports with those best management practices, *as a condition of certification.*[7] The Council's best management practices are clearly central to this proceeding. Additionally, the Council's procedure in issuing the Wholly New BMP is, without question, "an issue of fact" and "an issue in [this] case" and is expressly subject

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5 See, Sections 1 – 12 of the Act.

6 See, July 2004 Motion at pages 1-2.

7 As discussed infra, the Applicants have also failed to satisfy the requirements of the Wholly New BMP, and for that additional reason the Application should be dismissed.

to the requirements of Conn. Gen. Stat. § 4-181 (a) and (c) referenced supra. The Council's report to the legislature demonstrates a facial violation of those requirements within the context of its proceedings in Docket 272.

> Once it has been demonstrated that a violation of § 4-181 has occurred, a presumption of prejudice must be deemed to arise. Although this presumption is rebuttable, the burden of showing that a prohibited ex parte communication by an adjudicator has not prejudiced a party must be allocated to the agency if § 4-181 is to fulfill its salutary purpose.

Henderson v. Department of Motor Vehicles, 202 Conn. 453, 457-458 (1987).

II. THE COUNCIL MUST DISMISS THE APPLICATION

A. The Applicants Have Not Provided Required Information re: Protected Facilities

On January 26, 2005, the Applicants filed responses to D-W Discovery Requests Nos. 62 and 63. The response to D-W Discovery Request No. 63 states that there are structures in Wallingford which "appear to encroach into the existing right-of-way. . . ." Certain of those "structures" may also be Facilities.

The Act does not allow the Council to approve any overhead transmission route segment in which protected Facilities encroach into the existing ROW, as such would violate the minimum buffer zone requirements of the Act. The burden is on the Applicants to demonstrate, as a condition of Council approval, that there are no Facilities which encroach into the ROWs and that therefore, the

Applicants' proposal meets the minimum buffer zone requirement of the Act. The Applicants have thus far failed to submit such proof to the Council.

B. The Applicants Have Not Complied with the Vintage 1993 BMP or The Wholly New BMP.

The Applicants have not provided in their Application (or at any time since filing their Application) "baseline, preconstruction measurements of EMF" in accordance with the applicable "uniform measurement protocol" as required by the Vintage 1993 BMP in effect at the time the Application was filed. [8] More particularly, the Applicants have not provided in their Application (or at any time since filing their Application) baseline, preconstruction measurements of EMF, including the associated line currents, in accordance with the applicable "uniform measurement protocol", which is IEEE Std. 644. See, Application, Volume 6, page 8. That protocol requires in Section 8 thereof ("Reporting field measurements"), that "[b]ackground information, such as environmental conditions (e.g., temperature, humidity, ground cover), transmission line parameters (e.g., *line voltages and currents*, conductor geometry, measurement

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[8] For the convenience of the Council, a copy of the BMP in effect at the time the application was filed is attached hereto as Appendix B. (See Requirements Nos. 6 and 8).

locations), and instrumentation used *should be recorded*." (Emphasis added.)[9] For the convenience of the Council, an excerpt of IEEE Std. 644, containing the Cover Page, the "Typical background data sheet" and Section 8 are attached hereto as Appendix C. The Applicants have failed to submit this information as required by Section 8 of IEEE Std. 644, and, as ultimately required by the Vintage 1993 BMP and Public Act 04-246.[10]

In addition, Section II of the Wholly New BMP ("Pre and Post Construction MF Measurements") imposes the following obligation on the Applicants:[11]

> When designing a transmission line project, an applicant shall provide design alternatives and pre-construction estimates of MF resulting from each alternative. Preconstruction MF measurements can be obtained using mathematical modeling under a variety of current flows under normal loading, defined as 70 percent of the peak load, and peak loading conditions during winter and summer weather conditions.

At the February 1, 2005 hearing, John Prete testified that he understood the "mathematical modeling" of "Preconstruction MF measurements" to mean EMF calculations. See, 2/1/05 Tr. at p. 235. Mr. Prete further testified that for

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[9] This is notwithstanding the unqualified testimony of Witness Bailey on January 5, 2005 that "The measurements reported in the application and all other things were all performed according to the IEEE Standard 644 as noted in the application." Tr. 1/5/05, p. 141.

[10] The "spot EMF readings" submitted by the Applicants to date in support of the proposed facility are essentially meaningless without the other information required by IEEE Std. 644.

[11] As argued above, the Wholly New BMP should be rescinded. However, even if the Council denies that requested relief by determining that the Wholly New BMP are valid, it is clear that the Wholly New BMP have been ignored by the Applicants.

the 27.7 GW case, which has been identified as system-wide peak load within the next five years, 70% of peak load would require calculations assuming 19.39GW. Id. *Mr. Prete then admitted that the applicants have not done any 70% peak load EMF calculations.* See, 2/1/05 Tr. at p. 236. Certainly, the Record of this proceeding does not contain any EMF calculations at 70% of peak load.

In light of the fact that the Applicants have failed to provide pre-construction calculations modeling EMF levels at 70% of peak load at statutory facilities, they have failed to meet their burden of complying with the Wholly New BMP. If the Council ultimately determines that the Wholly New BMP are valid, the Council cannot certificate this facility and the Application must be dismissed, because the Applicants have not complied with the Wholly New BMP, as required by the Act.

C. The Applicants Have Not Provided Environmental Information Required By PUESA.

PUESA was enacted by the legislature for the purpose of balancing the need for adequate and reliable public utility service with the need to protect the environment of the state and to minimize damage to scenic, historic and recreational values. See Conn. Gen Stat. §16-50g. The overhead portions of the transmission facilities under review in this proceeding will traverse important ecological, recreational, historical, cultural and scenic areas. The proposed

transmission facilities could significantly and adversely impact these important resource values.

The Applicants have failed to provide substantive and detailed environmental information to enable the Council to make the specific findings required under PUESA. The Application and the testimony in the record fall short of the threshold requirements of PUESA for consideration of environmental impacts. The Application is deficient in critical ways and fails to meet the minimum standards for the required evaluation of environmental impacts.

Under Conn. Gen. Stat. §16-50p(a)(2), the Council cannot grant a Certificate unless it shall find and determine "***the nature of the probable environmental impact, including a specification of every significant adverse effect***, whether alone or cumulatively with other effects, on, and conflict with the policies of the State concerning, the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish, aquaculture and wildlife." *Id.* (Emphasis supplied.) The Council does not have a basis in the record of this proceeding to make all of those findings.

The project has substantially changed since the initial Application. As one example, the structures planned as part of the EMF mitigation proposal(s) are significantly higher than that proposed in the Application, in some cases more than twice the height. There is a dearth of evidence in the record to address the

potential impact of these significantly taller structures on environmental, ecological, historic or scenic values. Specifically, the Applicants have conceded that the taller structures will have comparably wider and deeper foundations. This can reasonably be expected to create new and different impacts to wetlands, vernal pools and amphibian breeding areas than those impacts previously identified in the initial Application. These structures will also surely have significant and detrimental impacts to the aesthetic and scenic values of the recreational and residential areas in which they are located. Similarly, there is no evidence as to what impact these structures may have on historic areas.

On September 9, 2003 the Council adopted revisions to its published Electric Line Transmission Facility Application Guide ("Application Guide") that set forth the exact types of environmental impact information and documentation required for inclusion in an application for a Certificate. These revisions to the Application Guide require the Applicants to identify existing conditions and the changes to those conditions that would result from the construction of the proposed facility. Further, the Applicants must specifically describe the impact the proposed transmission line and its construction would have on the environment, ecology, and scenic, historic, and recreational values. See Application Guide, Section VIII (K). The project currently under consideration by the Council fails to comply with many of those requirements.

The Council is not in a position to evaluate and select any of the overhead structural options that have been presented. For example, how can the Council make a determination as to the impacts to scenic, historic or recreational values when there have been no visual simulations or equivalent information presented that quantify the impact of significantly taller structures? Further, how can the Council assess the impacts to wetlands, and amphibian breeding areas when it has not reviewed the construction, foundation and right of way impacts of the significantly taller towers that could be implemented in EMF mitigation proposals? It cannot, and to do so would violate PUESA's requirement that the Council balance specific environmental impacts against public need.

The Council cannot issue a Certificate for this project without a full and complete evaluation of these potential environmental impacts, consistent with the requirements set forth in Conn. Gen. Stat. §16-50p(a)(2) and the revised Application Guide.

Finally, evaluation of the effects of the overhead transmission line on ecological, recreational, historical, cultural and scenic areas cannot be deferred to the Development and Management Plan. The Applicants filed a letter dated February 1, 2005 in which they acknowledged that effects on wetlands cannot be quantified at this time, due to uncertainties about what design will be implemented. The Applicants now propose to provide the Council with the required data and impact information in the Development and Management

("D&M") Plan. Submission of adequate information and documentation in order to evaluate the potential impacts to ecological, recreational, historical, cultural and scenic areas cannot be deferred until the Applicants file their D&M Plan; i.e., ***after*** their receipt of a Certificate for the project. Deferring an evaluation of environmental impacts to the D&M would violate Conn. Gen. Stat. §16-50p(a)(2), which prohibits the Council from issuing a Certificate unless it shall find and determine "the nature of the probable environmental impact." Id.

If the presentation of the data which would allow the Council to determine specific environmental impacts is deferred to the D&M plan, the result is that those impacts will not be balanced against public need, and the statutory requirement set forth under PUESA for the issuance of a Certificate will not have been met. The lack of this evidence in the record also denies Wallingford, its citizens and other stakeholders their due process rights to properly assess and contest the application. While Wallingford recognizes that the Council can issue a Certificate with certain conditions under Conn. Gen. Stat. §16-50p, the conditions it may impose are limited to the "construction or operation of the facility," such as conditions which "tweak" or fill in gaps in a particular design (i.e., move a certain pole or access to avoid potential impacts to a particular vernal pool and its buffer.) The information and documentation that is lacking in this Application is far more basic, and is essential for the Council to make its statutorily required findings pursuant to Conn. Gen. Stat. §16-50p(a)(2).

III. REQUESTED RELIEF

For the reason stated in Section (I) *supra*, and as an additional basis to those set forth in the January 2005 Motion, the Wholly New BMP should be rescinded.

For the reasons stated in Section (II) supra, the failure of the Applicants to provide the required proof that no Facilities encroach into the proposed rights-of-way, the failure of the Applicants to comply with either the Vintage 1993 BMP or the Wholly New BMP, and the failure of the Applicants to provide environmental information to the Council required under PUESA, render the Application fatally deficient and beyond the authority of the Council to approve.

Wherefore, Wallingford requests that the Council rescind the Wholly New BMP and dismiss the Application.

Respectfully Submitted

THE TOWN OF WALLINGFORD

By _____

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January 10, 2004

Senator John Fonfara, 1st District, Co-Chairman
Representative Steve Fontana, 87th District, Co-Chairman
Senator Robert Duff, 25th District, Vice Chairman
Representative Robert W. Megna, 97th District, Vice Chairman
Senator Thomas J. Herlihy, 8th District, Ranking Member
Representative Kevin M. DelGobbo, 70th District, Ranking Member

Energy and Technology Committee
Legislative Office Building, Room 3900
Hartford, CT 06106

Senator Andrea Stillman, 20th District, Co-Chairman
Representative Richard Roy, 119th District, Co-Chairman
Senator Edward Meyer, 12th District, Vice Chairman
Representative Edward E. Moukawsher, 40th District, Vice Chairman
Senator John McKinney, 28th District, Ranking Member
Representative Clark J. Chapin, 67th District, Ranking Member

Environment Committee
Legislative Office Building, Room 3200
Hartford, CT 06106

RE: Electric and Magnetic Field Best Management Practices for the Construction of Electric Transmission Lines in Connecticut; Public Act No. 04-246

Dear Senators and Representatives:

Pursuant to Public Act No. 04-246, on or before January 1, 2005, "the Connecticut Siting Council (Council) shall, in accordance with section 11-4a of the general statutes, submit a report ... containing the Council's most recent version of its standards for best management practices for electric and magnetic fields for electric transmission lines." Enclosed please find said report.

The Council conducted a publicly held meeting to discuss the revisions to this report on December 21, 2004. The Council received verbal remarks from the energy industry and their requests have been included. After discussion, the Council acted to adopt this updated version. Please note that the updated version of the EMF Best Management Practices will be placed on our website, distributed to the energy industry for further comments, and a consultant will be contracted in 2005 to further review this report and

make further additions or changes if necessary. The Council will keep each of you apprised of any further changes to this important document.

Please feel free to contact me of you have any questions in connection with this document, or if I may be of further service to you in any way. Thank you.

Very truly yours,

S. Derek Phelps
Executive Officer

enc.
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c: Pamela B. Katz, P.E., Chairman
Jean Henry, Governor's Office
John Jaramillo, Office of Policy and Management

SDP/laf

EXHIBIT A

Connecticut Siting Council
Publications

Electric and Magnetic Field Best Management Practices
February 11, 1993

Although scientific knowledge does not at this time permit firm judgments about possible health effects of 60 hertz electric and magnetic field (EMF) exposures from electric generation, substation and transmission facilities, the Connecticut Siting Council has adopted a cautious approach to the issue by adopting the following Best Management Practices. These practices are intended to recognize the latest information as well as effective technologies and management techniques on a project-specific basis to protect the public and maximize the efficiency of the electric generation, transformation, and transmission industry.

1. Administratively notice and recognize completed and ongoing scientific EMF research.
2. Require individual project-specific assessments of EMF.
3. Require detailed project-specific assessments of need and non-structural alternatives.
4. Require EMF assessments for project alternatives.
5. Require EMF assessments to consider exposure levels and durations with respect to existing and planned land uses.
6. Require baseline, preconstruction measurements of EMF during siting of new facilities.
7. Require post-construction measurement of EMF to extrapolate values for normal, peak, and maximum allowable continuous operating levels.
8. Require adoption and use of a uniform measurement protocol.
9. Solicit specific comments from the DEP, DPUC, and DOHS regarding EMF exposure during siting of new facilities.
10. Require consideration of low-EMF designs during the siting and construction of new facilities, including use of:
    a. Compact spacing;
    b. Optimum phasing of conductors;
    c. and Applicable and appropriate new field management technologies.
11. Consider project-specific exposure limits for EMF.
12. Recognize the possibility for future standards and consider conditioning approval on retrofitting or elimination of facilities to meet future federal and State standards.

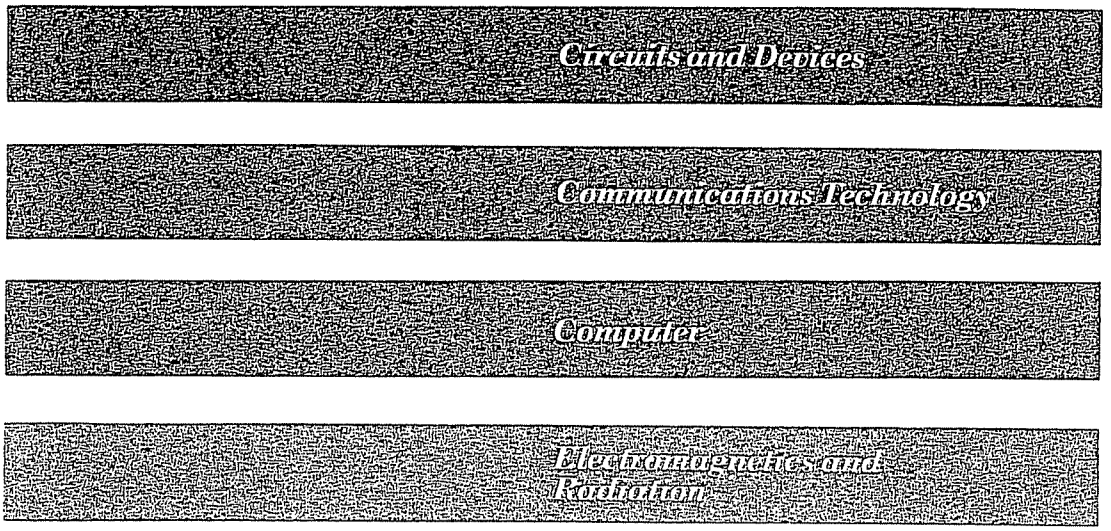
All council proceedings are conducted at publicly noticed meetings and hearings offering full opportunity for participation and due process as afforded by federal and State law.

JMR/cp
6437E

Content Last Modified on 9/1/2004 10:17:40 AM

IEEE Std 644-1994
(Revision of IEEE Std 644-1987)

IEEE Standard Procedures for Measurement of Power Frequency Electric and Magnetic Fields From AC Power Lines



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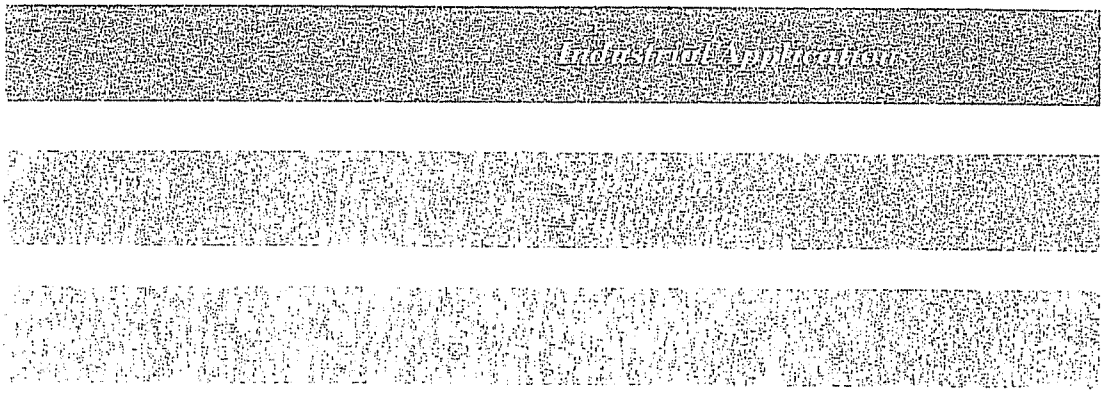

IEEE Std 644-1994

IEEE

Published by the Institute of Electrical and Electronics Engineers, Inc., 345 East 47th Street, New York, NY 10017, USA.

March 7, 1995

SH94258

A. Line Voltage, kV/ Line Current, A
  (1) Nominal _____
  (2) Actual _____
B. Line Conductors and Overhead Ground Wires
  (1) Type _____
  (2) Diameter, cm _____
  (3) Height, m _____
  (4) Phase relation of conductors _____
  (5) Sketch of line configuration (for example, figure 7) _____
C. Atmospheric Conditions
  (1) Temperature, °C _____
  (2) Relative humidity _____
  (3) Barometric pressure, pascal (Pa) _____
  (4) Wind velocity, m/s _____
  (5) Fair, rain, snow, etc. _____
D. Towers
  (1) Metal _____
  (2) Wood _____
  (3) Others _____
  (4) Sketch with dimensions _____
E. Harmonics
  (1) Content, percent _____
  (2) Nature of source, for example, industrial load _____
  (3) Distance to source, m _____
F. Number of Measurements
G. Instruments
  (1) Meter type
    (a) Manufacturer _____
    (b) Model _____
  (2) Probe and signal conditioning circuit
    (a) Description (shape) _____
    (b) Dimensions _____
    (c) Equivalent circuit _____
    (d) Frequency response _____
    (e) Directional characteristics _____
    (f) Corona onset field strength _____
    (g) Effects of _____
      (1) Electric or magnetic field _____
      (2) Temperature _____
      (3) Humidity _____
    (h) Reading characteristics (rms, etc.) _____
    (i) Accuracy and sensitivity _____
  (3) Holding devices
    (a) Length _____
    (b) Electrical characteristics _____
  (4) Connecting cable (if signal conditioning circuit is separate from probe)
    (a) Length _____
    (b) Type _____
  (5) Calibration information (brief description) _____

Figure 1—Typical background data sheet

To provide a more complete description of the *B*-field at a point of interest, measurement of the maximum and minimum fields with their orientations in the plane of the field ellipse can be made (see 5.1).

7.2 Lateral profile

The procedures for *E*-field measurements (see 5.2) shall be followed.

7.3 Longitudinal profile

The procedures for *E*-field measurements (see 5.3) shall be followed.

7.4 Precautions and checks during *B*-field measurements

7.4.1 Harmonic content

The response of certain magnetic field meters is influenced by high levels of harmonic content. Therefore, if possible, the waveform of the field or its derivative (induced voltage) should be observed to obtain an estimate of the amount of harmonic content (see 6.2). A qualitative observation can be made with an oscilloscope. Replacement of the oscilloscope with a wave analyzer would permit measurements, in percent, of the various harmonic components.

NOTE—The magnitudes of harmonic components in the induced voltage (field derivative) are enhanced by the harmonic number.

7.5 Measurement uncertainty

Measurement uncertainties due to calibration, temperature effects, etc., shall be combined (square root of the sum-of-the-squares) and reported as total estimated measurement uncertainty. The total uncertainty should not exceed ±10%.

8. Reporting field measurements

Background information, such as environmental conditions (e.g., temperature, humidity, ground cover), transmission line parameters (e.g., line voltages and currents, conductor geometry, measurement locations), and instrumentation used should be recorded. Figure 1 is an example of a typical background data sheet for transmission line field measurements. Figure 1 should not be regarded as being appropriate for all measurement situations. Depending on the measurement objectives (e.g., comparison of lateral profile with theoretical prediction vs. measurement of a typical lateral profile), more or less information may be required. Plots of electric and magnetic fields as depicted in figure 7 are recommended. A plan view similar to that shown in figure 8 is also recommended to provide further details of environmental conditions and line parameters.