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September 8, 2006 – **VIA ELECTRONIC MAIL**

Ms. Blanca S. Bayo, Director
Division of the Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 060512-EU
Proposed Adoption of New Rule 25-6.0343, F.A.C., Standards of Construction – Municipal Electric Utilities and Rural Electric Cooperatives

Dear Ms. Bayo:

Enclosed are the Initial Comments of Verizon Florida Inc. Concerning Proposed Rule 25-6.0343 for filing in the above matter. Also enclosed are the Affidavits of Dr. Lawrence M. Slavin and Steven R. Lindsay. Service has been made as indicated on the Certificate of Service. If there are any questions regarding this filing, please contact me at 770-284-5498.

Sincerely,

s/ Dulaney L. O'Roark III

Dulaney L. O'Roark III

Enclosures

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing were sent via U.S. mail on September 8, 2006 to the parties on the attached list.

s/ Dulaney L. O'Roark III

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Proposed Adoption of New Rule 25-6.0343, F.A.C., Standards of Construction - Municipal Electric Utilities and Rural Electric Cooperatives	Docket No. 060512-EU Filed: September 8, 2006

INITIAL COMMENTS OF VERIZON FLORIDA INC.
CONCERNING PROPOSED RULE 25-6.0343

Verizon Florida Inc. ("Verizon") submits these Initial Comments in compliance with the Commission's Order Granting Motion to Bifurcate Proceedings and Establish Controlling Dates and Establishing a New Docket issued on July 27, 2006. In support of these comments, Verizon also is filing the affidavits of Dr. Lawrence M. Slavin and Steven R. Lindsay. For the reasons stated below, proposed Rule 25-6.0343 should not be adopted in its current form.

A. Introduction

As a company that has made substantial investments in utility poles and attachments in Florida, Verizon shares the Commission's concern about network reliability and storm readiness. Verizon owns approximately 107,863 poles in Florida, almost 30,000 of which bear attachments by electric utilities.[1] Verizon attaches to approximately 381,000 electric utility poles in Florida, almost four times the number of poles Verizon owns.[2] Verizon's affiliates MCImetro Access Transmission Services LLC d/b/a Verizon Transmission Services and MCI Communications Services, Inc. attach to

[1] Lindsay Aff. ¶ 2.
[2] *Id.*

an additional 3,000 electric utility poles.[3] Verizon already has placed a substantial part of its Florida network underground and is rapidly installing additional facilities below ground as part of its FiOS project.[4] FiOS, which provides fiber to customers' homes, is provisioned almost entirely underground, protecting it from storms.[5] Verizon thus has made, and continues to make, significant strides toward a storm-hardened network.

Although Verizon shares the Commission's goal of network reliability, proposed Rule 25-6.0343 as currently drafted could potentially harm Verizon and its customers in several ways. First, for example, depending on how the municipal electric utilities and rural electric cooperatives ("electric utilities") exercise the discretion that would be given them, Verizon could be forced to incur substantial costs, such as paying increased rent for additional poles or paying to migrate facilities underground.[6] Because Verizon attaches to so many electric poles in Florida, these increased costs could be enormous.[7] Second, the proposed rule threatens to divert Verizon's resources from the FiOS project it is rolling out to meet the intense competition it faces in its Florida market.[8] Third, the proposed rule would authorize electric utilities to establish standards for pole attachments varying from the National Electrical Safety Code ("NESC"), which could require Verizon to upgrade, rearrange or even remove its attachments from electric utility poles. Not only might such standards conflict with Verizon's joint use and

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[3] *Id.*
[4] *Id.* ¶ 3.
[5] *Id.* ¶¶ 3, 8.
[6] *Id.* ¶ 5. Whether Verizon would have to pay additional rent would depend on the terms of the applicable joint use agreement.
[7] *Id.* ¶¶ 5-7.
[8] *Id.* ¶ 8.

license agreements, but they could increase its rental rates and impose additional financial and operational burdens.[9]

Verizon addresses its concerns with the subparts of proposed Rule 25-6.0343 in more detail below.

B. Proposed Amendments to Rule 25-6.0343(1)

Proposed Rule 25-6.0343(1) would vest electric utilities with the authority to establish construction standards for overhead and underground electrical transmission and distribution facilities. The electric utilities would be required to develop these standards within 180 days, after seeking input from other entities with joint use agreements, but without any requirement that the electric utilities accepting any of the input they receive.[10] No prior Commission approval of the standards is contemplated, whether for the initial standards or any subsequent revisions, nor would the electric utilities be required to provide the Commission with access to a copy of the standards unless the Commission so requested. Only broad guidance is provided as to what requirements the standards must meet – each electric utility "at a minimum" must comply with the 2002 version of the NESC, but the electric utility is free to impose whatever additional standards it chooses. An attacher or other party that is dissatisfied with an electric utility's standards may challenge them before the Commission, but the disputed standards apparently would remain in effect until the Commission resolved the dispute.

[9] *Id.* ¶ 9. Again, whether Verizon would be required pay additional pole would depend on the terms of the applicable joint use agreement.
[10] *See* proposed Rule 25-6.0343(4).

Proposed Rule 25-6.0343(1) would give far too much discretion to the electric utilities to determine construction standards. There is a significant risk that electric utilities could abuse their discretion by adopting construction standards that could harm attachers, for example, by potentially increasing pole costs that the electric utilities could attempt to pass through to the attachers.[11] The standards adopted by electric utilities under the proposed rule apparently would remain in place until the completion of a dispute resolution proceeding, which could take several months, if not a year or more. As the pole owners, the electric utilities would be in a position to interpret and implement the standards, which could give rise to additional disputes with the attachers. The attachers would be at a disadvantage because as a practical matter electric utilities would be able to enforce their interpretations until dispute resolution proceedings were completed. In short, giving electric utilities broad discretion to define and implement their own standards should not be permitted.

The discretion afforded electric utilities is particularly troublesome with respect to extreme wind loading. Rule 25-6.0343(1)(e) would call for electric utilities to be guided by the extreme wind loading standards, "to the extent reasonably practical, feasible, and cost-effective" for the construction of distribution facilities. Electric utilities would be required to include in their construction standards guidelines and procedures governing the use of extreme wind loading standards for "new construction," "major planned work, including expansion, rebuild, or relocation of existing facilities," and "targeted critical infrastructure facilities and major thoroughfares." In other words, electric utilities arguably would be free to apply extreme wind loading standards to almost any

[11] Whether electric utilities could actually pass through such costs would depend on the terms of the applicable joint use agreements.

distribution facilities they wish, regardless of pole grade and height. As outlined in the report attached to the Affidavit of Lawrence M. Slavin, applying the extreme wind loading standards in this manner would constitute a radical departure from the NESC, and could result in dramatically higher pole costs as well as significant unintended consequences.

As Dr. Slavin explains, to determine pole strength requirements for Grade B and C poles,[12] the NESC requires that two types of storms be taken into account: (i) combined ice and wind storms, governed by NESC Rule 250B; and (ii) extreme wind storms, governed by NESC Rule 250C. The combined ice and wind storm standards apply to Grade B and C poles regardless of their height, so all such poles, including distribution poles, must meet the standards outlined in Rule 250B.[13] Because the extreme wind loading standards only apply to poles that are at least 60 feet high, on the other hand, Rule 250C does not apply to most distribution poles, which typically are shorter than 60 feet.[14] Indeed, the NESC Committee has studied this issue carefully and has chosen this height exclusion so that the extreme wind loading standards would not apply to distribution poles.[15] Proposed Rule 25-6.0343(1)(e), which would require that electric utilities be guided by extreme wind loading standards when constructing distribution facilities, thus would mark a major departure from the NESC.[16]

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[12] Grade B and C poles carry primary power (more than 750 volts). Most distribution poles carrying primary power are Grade C poles, with the Grade B classification applying when greater reliability is required, such as at railroad crossings. Grade N applies to poles if they carry secondary power (less than 750 volts) or only support telecommunications cables, corresponding to the lowest level of reliability. Slavin Affidavit, Appendix 1 ("Slavin Report") § 2.3.

[13] Slavin Report § 2.1.
[14] *Id.* § 2.2.
[15] *Id.* § 3.1.
[16] *Id.*

To the extent electric utilities determine that applying the extreme wind loading standards of NESC Rule 250C would be "reasonably practical, feasible and cost-effective," and thus decide to be guided by them, one result would be a substantial increase in pole size (or stronger poles made of different materials) or in the number of poles, which would dramatically increase costs.[17] Stouter or more numerous poles also would lead to a number of unintended consequences, including an increase in the number or severity of traffic accidents.[18] Obviously, the more poles there are, the greater the likelihood there is that an automobile will collide with one and the driver will experience bodily harm or death. Moreover, increasing the number of poles can multiply the number of poles that are knocked down by flying debris during high wind storms, making the recovery process much more difficult and time consuming.[19] And the complexity of applying the high wind loading standards will lead to confusion and delay, and possible errors in implementation, to the detriment of consumers.[20] The Commission thus should proceed with great caution when it considers substituting its judgment for that of the NESC Committee, which has carefully taken these factors into account.

Because proposed Rule 25-6.0343(1)(e) represents such a dramatic change that could result in serious negative consequences, the best course of action would be for the Commission not to adopt this proposed amendment to Rule 25-6.0343(1)(e).[21] If the Commission nonetheless determines that it wishes to make changes, then at the least it should attempt to reduce the dramatic impact of the changes by making the

[17] *Id.* § 4.1.
[18] *Id.* § 4.2.
[19] *Id.*
[20] *Id.*
[21] *Id.* § 5.

following modifications: (i) it should make clear that extreme wind loading standards do not apply to Grade N poles (to which neither NESC Rule 250C nor NESC Rule 250B apply); (ii) the application of Rule 250C should be modified to lessen its impact, for example by using the reduced loads for Grade C poles from the 2007 edition of the NESC; and (iii) the changes should be applied on a trial basis and initially limited to a geographic area and a defined period, such as one to two years.[22]

C. Proposed Rule 25-6.0343(2)

Proposed Rule 25-6.0343(2) states as a general principle that "to the extent practical, feasible, and cost-effective," electric distribution facilities normally should be placed in front of customers' premises, adjacent to public roads. Three subsections apply this principle to scenarios involving (1) construction of overhead facilities; (2) installation of underground facilities; and (3) conversion of overhead facilities to underground facilities. In the third scenario, a local government requesting the conversion must meet the electric utility's financial and operational requirements before the electric utility must place facilities in road rights of way. When the projects described in proposed Rule 25-6.0343(2) affect third-party attachments, the electric utility must seek input from the third-party attachers, but it is not required to take any action based on the input it receives.[23] The electric utility also must, "to the extent practical, coordinate the construction of its facilities with the third-party attacher," but the timing and extent of the required coordination are not specified.[24]

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[22] *Id.*
[23] *See* proposed Rule 25-6.0343(4).
[24] *See id.*

Proposed Rule 25-6.0343(2) fails to take into account sufficiently the burdens that could be placed on third-party attachers by electric utility construction, installation and migration projects. For example, by failing to specify the amount of notice that must be given or the extent of the coordination that must be afforded in connection with such projects, the proposed rule leaves electric utilities free to move forward with little regard for the operational disruption that could result to attachers. As noted above, Verizon is in the midst of a massive project to bring its FiOS network to customers' homes. To the extent electric utilities were to rely on this proposed rule to install or move their own facilities, Verizon would require extensive notice (at least 12 months) and effective coordination so Verizon could make any necessary adjustments to its plans. For instance, Verizon would want to avoid relocation of copper facilities when its plans call for replacing those facilities with fiber in the near future. With effective coordination, such costly duplication of effort could, at least to some extent, be avoided. Further revisions to the rule are necessary to ensure that the required notice is specified and the duty to coordinate is described in detail.

The proposed rule also does not address the costs that would be incurred by third-party attachers. To the extent electric utilities add poles when moving them from the back property line to the front, the additional costs to attachers could be enormous. If Verizon were required to place attachments on 10% more poles, its costs would increase by some $20 million, most of which would be one-time engineering and transfer costs.[25] If the number of poles to which Verizon attaches were increased by

[25] Lindsay Aff. ¶ 6 and Attachment 1. Note that this figure represents the costs that would be experienced during the first year after installation. This figure assumes an increase to attachment fees, which, if imposed under the applicable joint use agreement, would continue on a recurring basis, raising Verizon's costs further still.

50%, Verizon's cost would be $50 million.[26] Moving facilities underground also entails tremendous costs. In a feasibility study Verizon conducted to determine the cost of moving the existing copper network underground on Davis Islands, it determined the cost to be $4,000 per household.[27] Placing copper facilities underground would be particularly expensive and wasteful for Verizon because of its plans to install underground fiber facilities. If, on the other hand, Verizon decides not to migrate its facilities, it may be required to buy the poles that have been abandoned and pay for easement rights.[28] Although the proposed rules provide compensation to the electric utilities, no similar provision is made for attachers, nor are attachers given any right to object to electric utilities' plans to migrate facilities. Proposed Rule 25-6.0343(2) should be revised to take into account the costs that would be imposed on third-party attachers.

Proposed Rule 25-6.0343(2) also raises serious concerns with respect to Verizon's carrier-of-last resort obligations under Florida law, which among other things require local exchange telecommunications companies, until January 1, 2009, "to furnish basic local exchange telecommunication service within a reasonable time period to any person requesting such service within the company's service territory." Fla. Stat. § 364.025(1). To the extent that standards under the proposed rule disrupt Verizon's ability to fulfill its carrier-of-last-resort obligations, the standards would conflict with Florida law. The proposed rule should be revised to prevent such a conflict.

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[26] The potential for increasing the number of pole attachments by 50% or even more becomes greater when the extreme wind loading standards addressed in proposed Rule 25-6.0343(1)(e) are taken into account.
[27] Lindsay Aff. ¶ 7.
[28] *Id.* ¶ 5.

D. Proposed Rule 25-6.0343(3)

Proposed Rule 25-6.0343(3) requires electric utilities to include in their construction standards "safety, reliability, pole loading capacity, and engineering standards and procedures for" third-party attachments. Thus, electric utilities would be required to develop these standards within 180 days, after seeking input from other entities with joint use agreements, but without any requirement that the electric utilities accept any of the input they receive and without prior Commission approval. Only broad guidance is provided as to what requirements the third-party attachment standards must meet. They are required to "meet or exceed" the applicable edition of the NESC, as well as other applicable standards under state and federal law to ensure "as far as reasonably possible, that third-party facilities attached to electric transmission and distribution poles do not impair electric safety, adequacy, or reliability; do not exceed pole loading capacity; and are constructed, installed, maintained, and operated in accordance with generally accepted engineering practices for the utility's service territory." Disputes concerning the attachment standards are to be resolved by the Commission.[29]

As a threshold matter, the Commission lacks jurisdiction to regulate the rates, terms and conditions of pole attachments. Under federal law, the FCC has such jurisdiction unless "such matters are regulated by a State." 47 U.S.C. § 224 (b)(1) and (c)(1). Whether a state may be said to regulate such rates, terms and conditions is not left in doubt, because a state that regulates pole attachments is required to file a certification to that effect with the FCC. 47 U.S.C. § 224 (c)(2). There can be no dispute, therefore, that the Florida legislature has not authorized the Commission to

[29] *See* Proposed Rule 25-6.0343(4).

regulate pole attachments. When the Commission issued an order more than 25 years ago certifying that it had such authority, the Florida Supreme Court quashed the order. *Teleprompter Corp. v. Hawkins*, 384 So.2d 648 (Fla. 1980). To Verizon's knowledge, the Commission has not issued any subsequent order certifying its authority to regulate pole attachments, and no party to this docket has asserted otherwise. Thus, only the FCC may regulate the rates, terms and conditions of pole attachments in Florida, and to the extent proposed Rule 25-6.0343(3) would regulate such rates, terms and conditions, it would stand on infirm ground.

Proposed Rule 25-6.0343(3) also is problematic because it gives far too much discretion to the electric utilities to determine third-party attachment standards.[30] There is a significant risk that electric utilities could abuse that discretion by adopting standards that could harm attachers by requiring them to upgrade, rearrange or remove their attachments. The standards adopted by electric utilities apparently would remain in place until the completion of a dispute resolution proceeding, which could take several months, if not a year or more. As the pole owners, the electric utilities would be in a position to interpret and implement the standards, which could give rise to additional disputes with the attachers. The attachers also would be at a disadvantage because as a practical matter electric utilities would be able to enforce their interpretations until dispute resolution proceedings were completed. In short, giving electric utilities broad discretion to define and implement their own standards is particularly inappropriate in this context and should not be permitted.

[30] Although SB 888 authorized the *Commission* to adopt construction standards that exceed the NESC, it did not authorize the Commission to permit electric utilities to establish those standards.

Verizon's pole attachment rates in Florida already are the highest of any operating company in the Verizon West (former GTE) footprint, and those rates are increasing at an alarming pace.[31] Proposed Rule 25-6.0343(3) threatens to accelerate the rate of increase by imposing even greater costs on attachers. Unlike rate-regulated electric utilities, telecommunications carriers cannot simply pass these cost increases on to their customers. The cost impact of the proposed rule to third-party attachers should be taken into account before any final rule is adopted.

For the foregoing reasons, Verizon respectfully submits that proposed Rule 25-6.0343 should not be adopted in its current form. Further consideration of the interests and concerns of third-party attachers and other interested parties should be given before final rules are adopted.

Respectfully submitted on September 8, 2006.

By: s/ Dulaney L. O'Roark III

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Attorney for Verizon Florida Inc.

[31] Lindsay Aff. ¶ 10.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Proposed Adoption of New Rule 25-6.0343, F.A.C., Standards of Construction - Municipal Electric Utilities and Rural Electric Cooperatives	Docket No. 060512-EU Filed: September 8, 2006

AFFIDAVIT OF STEVEN R. LINDSAY

The undersigned, being duly sworn, states as follows:

1. I am employed by Verizon as a Staff Consultant – Network Engineering with responsibility for the negotiation and administration of joint use contracts with electric power companies, competitive local exchange carriers, cable TV companies, railroads, and governmental entities in the states of Florida, North Carolina, and South Carolina. My background in the telephone industry spans 26 years. I have worked as a cable splicer and an outside plant construction supervisor, and have held various other positions in outside plant engineering, most recently as a staff consultant negotiating joint use contracts. I was a Director on the Oregon Joint Use Association (OJUA) in 2005-06 prior to coming to Florida. I represented both Verizon and the OJUA in the Oregon joint use workshops and Commission formal and informal hearings concerning safety and joint use rule making. I have a Bachelors degree in Business Management from Nova University in Florida.

2. Verizon Florida Inc. ("Verizon") owns 107,863 poles in Florida, about 29,632 of which bear electric utility attachments. Verizon attaches to approximately 381,000 electric utility poles in Florida, almost four times the number of poles that it owns. In addition, Verizon's affiliates, MCImetro Access Transmission Services LLC

d/b/a Verizon Access Transmission Services and MCI Communications Services, Inc., are attached to approximately 3,000 power poles under separate agreements.

3. Verizon actively maintains its network and invests heavily to ensure network reliability. A substantial portion of Verizon's Florida network already has been placed underground and through its FiOS project, Verizon is aggressively spending hundreds of millions of dollars to install its new, storm-hardened, fiber network, 99.9% of which is underground. This new passive optical (PON) network is virtually impervious to storm damage, flooding, and lightening strikes, and improves the survivability and recovery of the network. Unlike copper networks, a PON network does not employ live electronic signals; instead, fiber emits refracted light waves from point A to point B. Moreover, there are significant operational benefits with fiber that enables faster recovery and restoration. Verizon has passed 600,000 Florida households to date and has placed more than 26 million feet of fiber in the state. Verizon has made a $550 million investment in Florida so far and the project is moving ahead full speed. As the FiOS project is further deployed, it is Verizon's intention to migrate existing customers served by copper facilities to fiber facilities.

4. Proposed Rule 25-6.0343 threatens significant harm to Verizon, both financially and operationally. Below I address three of the potential problems that implementation of these rules could pose.

5. First, proposed Rule 25-6.0343, as drafted, could lead to dramatically increased costs for pole attachers. For example, if electric utilities increase the number of poles in service, move their facilities to new poles or relocate facilities underground,

third-party attachers will be affected.[1] Not only must they pay engineering and transfer expenses when poles are added or replaced with stronger poles, but under their joint use agreements they may be required to pay increased attachment fees.[2] And when an electric utility elects to move or relocate facilities Verizon may have to pay to acquire the abandoned facilities and pay for easement rights. While the proposed rules provide for the compensation of the electric utilities making these changes, they do not provide for the compensation of third-party attachers, and the electric utilities would have no incentive to take the carriers' costs into account.

6. Appendix 1 to my affidavit projects estimated costs associated with proposed storm hardening requirements.[3] Assuming that Verizon is required to place 10% more poles in its network to comply with the electric companies' yet-to-be-defined standards, the additional cost experienced during the first year after installation would be approximately $20 million, most of which would be from one-time engineering and transfer costs. This figure assumes an increase to attachment fees, which would continue after the first year, raising Verizon's costs further still. Making another equally valid assumption that 50% more poles would be required,[4] Verizon's first-year cost would be $100 million.

7. The relocation of aerial facilities underground brings additional complexities and costs to the forefront that affect industry participants as well as customers. For example, Verizon participated in a multiple-phase project to investigate

[1] Proposed Rule 25-6.0343(1)(e), which concerns extreme wind loading and is discussed in the Affidavit of Dr. Lawrence M. Slavin, could have this kind of cost impact, by resulting in an increased number of poles to shorten span lengths or an increase in pole sizes.
[2] Whether Verizon must pay electric utilities additional attachment fees in a particular case will depend on the applicable joint use agreement.
[3] The number of poles used represents 4% budgeted over actual number of poles placed.
[4] This assumption becomes more probable when the extreme wind loading standards addressed in proposed Rule 25-6.0343(1)(e) are taken into account.

the feasibility of converting overhead utilities to underground facilities on Davis Islands located in Tampa, Florida. The project identified several benefits, including disaster preparedness and recovery. Verizon estimated that it would cost approximately $10 million or $4,000 per household to relocate its facilities in a scenario that included close coordination and cooperation with other utilities. The effort made it clear that undergrounding brings physical and legal complexities, including damage and disruptions caused by excavation, high costs associated with relocation, cost recovery issues, right-of-way issues, and negotiation of easements.

8. Second, proposed Rule 25-6.0343 threatens to divert Verizon's resources from its capital-intensive FiOS project, which Verizon is rolling out to meet the heated competition it faces in its Florida market. FiOS brings fiber to customers' homes, providing them with telephone, broadband and television services, and enabling Verizon to compete head to head with cable companies and other service providers. To the extent Verizon is forced to expend resources coordinating with electric utilities' projects undertaken under the proposed rules, the FiOS rollout will be impeded, to the detriment of Florida consumers.

9. Third, if Rule 25-6.0343 were adopted as currently proposed, Verizon would have to comply with the construction and maintenance standards set by the electric utilities. Because these new standards may differ from the existing, uniform national NESC standards, they could require Verizon to upgrade or rearrange its attachments to electric utility facilities, or even to remove them. To the extent new standards are imposed on Verizon through the proposed rule, they may also conflict with Verizon's joint use and license agreements that govern Verizon's attachments to

electric facilities. Among other things, the new standards could dramatically affect Verizon's rental rates (depending of the terms of applicable joint use agreements) and impose additional financial and operational burdens that are not contemplated under the existing contracts.

10. Verizon's pole attachment rates are already increasing at an alarming rate and proposed Rule 25-6.0343 as currently drafted would accelerate this pace. Florida pole attachments rates are the highest of any other operating company in the Verizon West (former GTE) foot print. As an example, Verizon received a proposed attachment rate increase of 21% covering 2005 to 2006 from one electric utility. This proposed increase equals $781,986 per year. The reason cited for the larger than anticipated increase is the utility's rising pole and maintenance costs, including costs from the 2004 storm season not recoverable from its rate payers. This utility also indicated that as a result of Florida legislation additional improvements will be made and costs will be reflected for the first time in the 2006 FERC data used to calculate charges.

Further Affiant sayeth naught.

Steven R. Lindsay

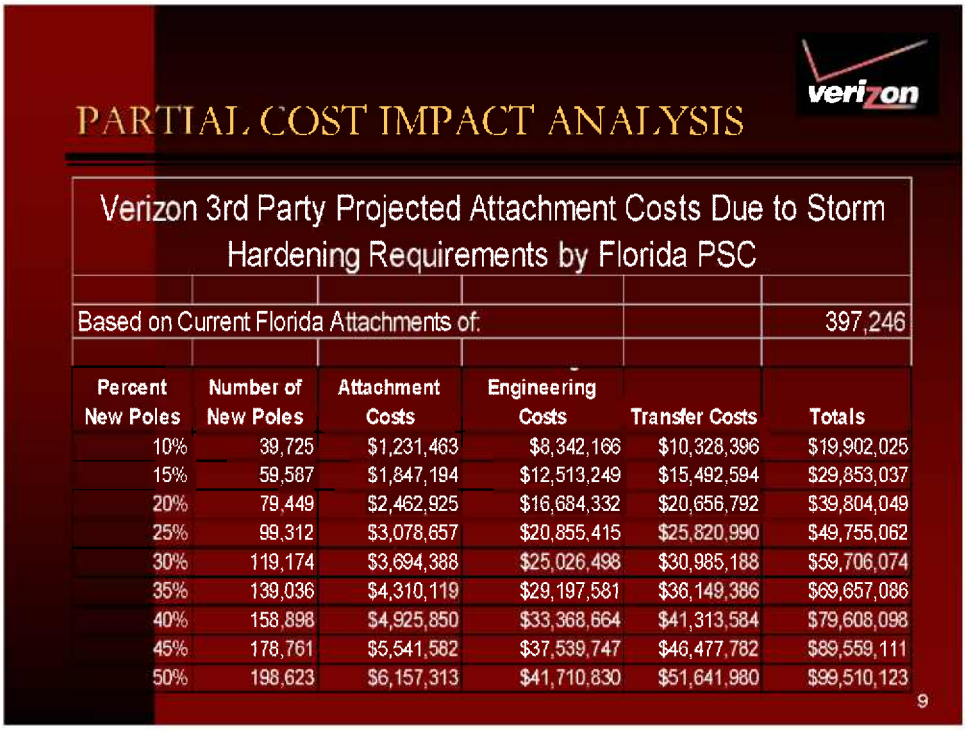
Subscribed and sworn to before me this 7 day of SEPTEMBER, 2006 (MWH)

Notary Public, State of Florida

My commission expires: 12/8/2007

MELINDA AMOROSO
MY COMMISSION # DD 273579
EXPIRES: December 8, 2007
Bonded Thru Notary Public Underwriters

Appendix 1



PARTIAL COST IMPACT ANALYSIS

Verizon 3rd Party Projected Attachment Costs Due to Storm Hardening Requirements by Florida PSC

Based on Current Florida Attachments of: 397,246

Percent New Poles	Number of New Poles	Attachment Costs	Engineering Costs	Transfer Costs	Totals
10%	39,725	$1,231,463	$8,342,166	$10,328,396	$19,902,025
15%	59,587	$1,847,194	$12,513,249	$15,492,594	$29,853,037
20%	79,449	$2,462,925	$16,684,332	$20,656,792	$39,804,049
25%	99,312	$3,078,657	$20,855,415	$25,820,990	$49,755,062
30%	119,174	$3,694,388	$25,026,498	$30,985,188	$59,706,074
35%	139,036	$4,310,119	$29,197,581	$36,149,386	$69,657,086
40%	158,898	$4,925,850	$33,368,664	$41,313,584	$79,608,098
45%	178,761	$5,541,582	$37,539,747	$46,477,782	$89,559,111
50%	198,623	$6,157,313	$41,710,830	$51,641,980	$99,510,123

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Proposed Adoption of New Rule 25-6.0343, F.A.C., Standards of Construction - Municipal Electric Utilities and Rural Electric Cooperatives	Docket No. 060512-EU Filed: September 8, 2006

AFFIDAVIT OF DR. LAWRENCE M. SLAVIN

The undersigned, being duly sworn, states as follows:

1. I am currently Principal of Outside Plant Consulting Services, Inc. Previously, I had an extensive career at Lucent (formerly AT&T), Bell Telephone Laboratories and Telcordia Technologies (formerly Bellcore). My career at Bell Laboratories, at which I was selected to be a Distinguished Member of Technical Staff, spanned more than 28 years (1961-1989), primarily in telecommunications product design and development. During the subsequent 12 years (1990-2001), I was a member of Telcordia's research and professional service organizations, and served as Director of the Network Facilities, Components, and Energy Group, responsible for requirements, testing, and analysis of outside plant media, components, and powering for telecommunications applications, as well as related installation and construction guidelines.

2. I received my Ph.D in mechanical engineering from New York University in 1969, my Master of Science in engineering mechanics from New York University in 1963 and my Bachelor of Science in mechanical engineering from The Cooper Union for the Advancement of Science & Art in 1961.

3. I have been an active member of NESC Subcommittee 5 since 1998, and in that capacity helped to develop the 2002 edition of the NESC and the recently issued

2007 edition. Subcommittee 5 (Overhead Lines – Strength & Loading) is directly responsible for specifying the storm loads and associated structural strength requirements referenced by the PSC. I am Chair of Working Group 5.7 (Seminars and Presentations; Subcommittee 5), and have served on Working Group 5.2 (Complete Revision of Sections 25 and 26; Subcommittee 5), and on the immediately relevant Working Group 5.8 (Application of Extreme Wind to All Structures; Subcommittee 5). I have also been Chair of Working Group 4.10 (New Ice Loads and Clearances; Subcommittee 4, Overhead Lines – Clearances), and serve on as the Accredited Standards Committee ASC-O5 (responsible for *ANSI O5.1, Wood Poles, Specifications and Dimensions*).

4. As Chair of WG 5.7, I have been responsible for organizing and coordinating the following industry information sessions, as well as providing some of the associated technical presentations:

- ***Panel Session: Structural Reliability-Based Design of Utility Poles and the National Electrical Safety Code*, 2003 IEEE Transmission & Distribution Conference and Exposition, 2003**
- ***Panel Session on National Electrical Safety Code (NESC), 2002 Edition, ANSI C2*, 2001 IEEE Transmission & Distribution Conference and Exposition, 2001**
- ***Panel Session on Proposed Changes to Strength & Loading Requirements for the 2002 Edition of the National Electrical Safety Code (NESC)*, IEEE Power Engineering Society, Towers, Poles & Conductors (TP&C) Subcommittee Meeting, 2000**

I will be chairing a panel session regarding the strength and loading requirements of the 2007 edition of the NESC, and presenting related technical information, at the TP&C Subcommittee Meeting in January 2007.

5. Appendix 1 attached to this Affidavit is a report I have prepared concerning proposed Rule 25-6.034 that is being considered in a related proceeding concerning investor owned electric utilities. Because proposed Rule 25-6.0343(1)(e) is substantially the same as proposed Rule 25-6.034 (except that it applies to municipal electric utilities and rural electric cooperatives instead of investor owned electric utilities), my report applies with equal force to proposed Rule 25-6.0343(1)(e). As I discuss in detail in the report, the proposed rule's requirement that electric utilities be guided by the extreme wind loading standards specified in the 2002 edition of the NESC could result in substantially higher facilities costs and lead to significant unintended consequences. Accordingly, I recommend that this requirement not be included in the proposed rule, or (if this recommendation is not accepted), that certain limitations be adopted.

6. Appendix 2 attached to this Affidavit provides more detailed information concerning my career in the telecommunications and related utility industries, including my activities in relevant professional organizations, such as the Main Committee and several Subcommittees for the NESC.

Further Affiant sayeth naught.

Lawrence M. Slavin

Subscribed and sworn to before me this 7 day of SEPTEMBER, 2006.

Notary Public, State of New Jersey

My commission expires:

Sworn to and subscribed before me this 7 day of Sept., 2006

DARRELL MCMILLAN
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 6/20/2010

APPENDIX 1

Report Concerning Proposed Rule 25-6.034 As It Relates to Extreme Wind Loading Requirements

1. Introduction

This note provides comments regarding the proposed Florida Public Service Commission (PSC) Rule 25-6.034 to require that the extreme wind loading of the 2002 edition of the National Electrical Safety Code (NESC) be reflected in the design of electric utility-owned poles, including those with third-party (telecommunications) attachments. In particular, NESC-2002 Figure 250-2(d), part of NESC Rule 250C, is cited as a guide. The stated objective of the PSC is to "enhance reliability and reduce restoration costs and outage times" due to hurricane events, such as recently experienced during Hurricane Wilma. The present comments discuss the NESC rules (2002 edition), as applicable to the State of Florida, recent relevant discussions and decisions within the NESC Committee, and the impact of adopting the Extreme Wind Loads of Rule 250C throughout Florida.

2. NESC-2002

The NESC is an American National Standards Institute (ANSI) standard based upon a consensus of those substantially concerned with its scope and provisions, including the Institute of Electrical and Electronic Engineers (IEEE), which also acts as the Secretariat. Other members of the NESC Committee include organizations representing providers of electric power or communications service, their suppliers, and other affected or interested parties. The NESC includes various provisions for the safeguarding of persons from hazards from the installation, operation, and maintenance of electric supply and communication lines and equipment. The rules contain the basic provisions that are considered necessary for the safety of employees and the public.

In general, adherence to the NESC is voluntary; however, many commissions throughout the United States routinely adopt the latest edition, or specific editions, for application within their jurisdictions. For example, the Florida PSC has adopted the 2002 edition.

Sections 25 and 26 of the NESC provide the required strengths and loadings of utility poles and other structures. Section 25 specifies the type storm loads that Grade B or C utility lines are required to withstand. ("Grades of Construction" are discussed below.) Section 26 specifies the required strengths of the structures, as subject to the storm loadings specified in Section 25. (Most of Section 26 -- *e.g.*, Rule 261 -- applies to Grade B or C construction.) Two types of storms are specified -- (1) Combined Ice and Wind Loading (Rule 250B) and (2) Extreme Wind Loading (Rule 250C).

2.1 Combined Ice and Wind (Rule 250B)

Rule 250B refers to the Loading District map, NESC Figure 250-1, reproduced below. The three loading districts in the United States (Heavy, Medium and Light) specify the amount of radial ice buildup and a concurrent wind pressure. The Heavy and Medium districts in the north and central portions of the United States are subject to ½ and ¼ -

inch radial ice buildup, respectively, on all power and communications wires, cables, and conductors, and a concurrent wind pressure corresponding to 40 m.p.h.. The Light district in the southerly portion of the country, including Florida, is assumed to experience no ice buildup, but a wind pressure corresponding to 60 m.p.h. The latter wind speed, although only 50% greater than that assumed in the rest of the country, corresponds to a wind pressure of more than twice that in the Heavy or Medium districts, due to the strong (non-linear) dependence of the wind force on wind speed.[1] However, the lower pressure in the Heavy or Medium district is applied to a greater "sail area" due to the ice buildup on the wires and conductors. Depending upon the wire or conductor diameters, and the ice buildup levels, the resultant transverse loads in the "Light" district may exceed that in the so-called "Heavy" or "Medium" areas. In addition, the application of Rule 250B requires "overload" factors to be applied to the calculated wind forces to provide a conservative margin of safety when selecting appropriate pole sizes. A factor of 2-to-1 is applied to the common Grade C construction, and a factor of 4-to-1 is applied to Grade B construction, where required.[2] (See Section 2.3.) This procedure results in a fairly robust design that experience has shown to provide reliable, safe service.

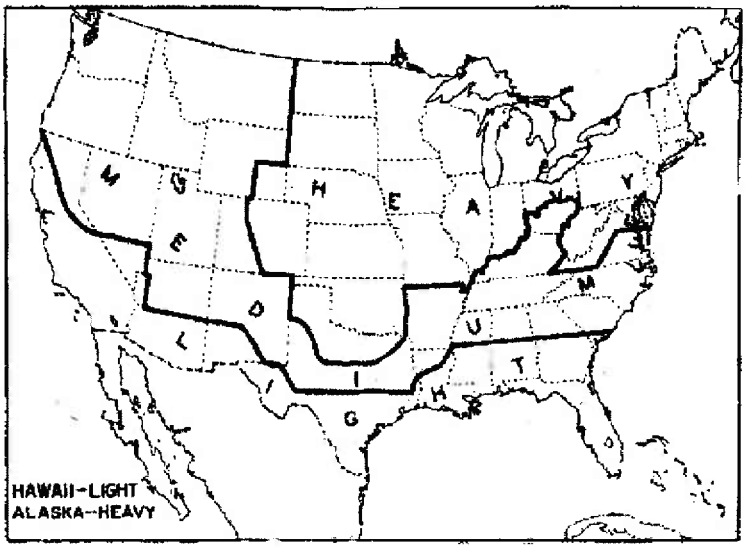

Fig 250-1
General Loading Map of United States with Respect to Loading of Overhead Lines

[1] The wind pressure, or force, is proportional to the square of the wind speed.

[2] The present discussion assumes "tangent" pole lines, without significant corner angles where guys may be required. For such tangent lines, the transverse wind loads typically represent the critical design condition.

Rule 250B applies to all Grade B or C structures, regardless of height, and is typically used by most utilities to determine the strength requirements for distribution poles.

2.2 Extreme Wind (Rule 250C)

NESC Rule 250C refers to various wind maps, of which Figure 250-2(d), including the state of Florida, is reproduced below. The wind speeds[3] vary from approximately 95 m.p.h. (interpolated) in the north of the state to as much as 150 m.p.h. at the southern tip. The minimum 95 m.p.h. speed corresponds to a wind pressure of 2½ times that of the 60 m.p.h. wind assumed in the Light loading district. The maximum 150 m.p.h. speed corresponds to a wind pressure of more than six times that due to the 60 m.p.h. wind. However, the corresponding overload factors for Rule 250C are lower than that of Rule 250B, somewhat reducing the wide divergence in pole strength requirements. Nonetheless, if applicable, the impact on pole strength and sizes in Florida, and on utility construction practices and costs, would be major, as discussed in detail in Section 4. For various reasons, as discussed in Section 3.1, the NESC only applies Rule 250C to structures exceeding 60 feet in height above ground. This effectively exempts the vast majority of distribution poles. For cases where both Rule 250B and 250C apply, the larger effective loads would determine the required pole strength.

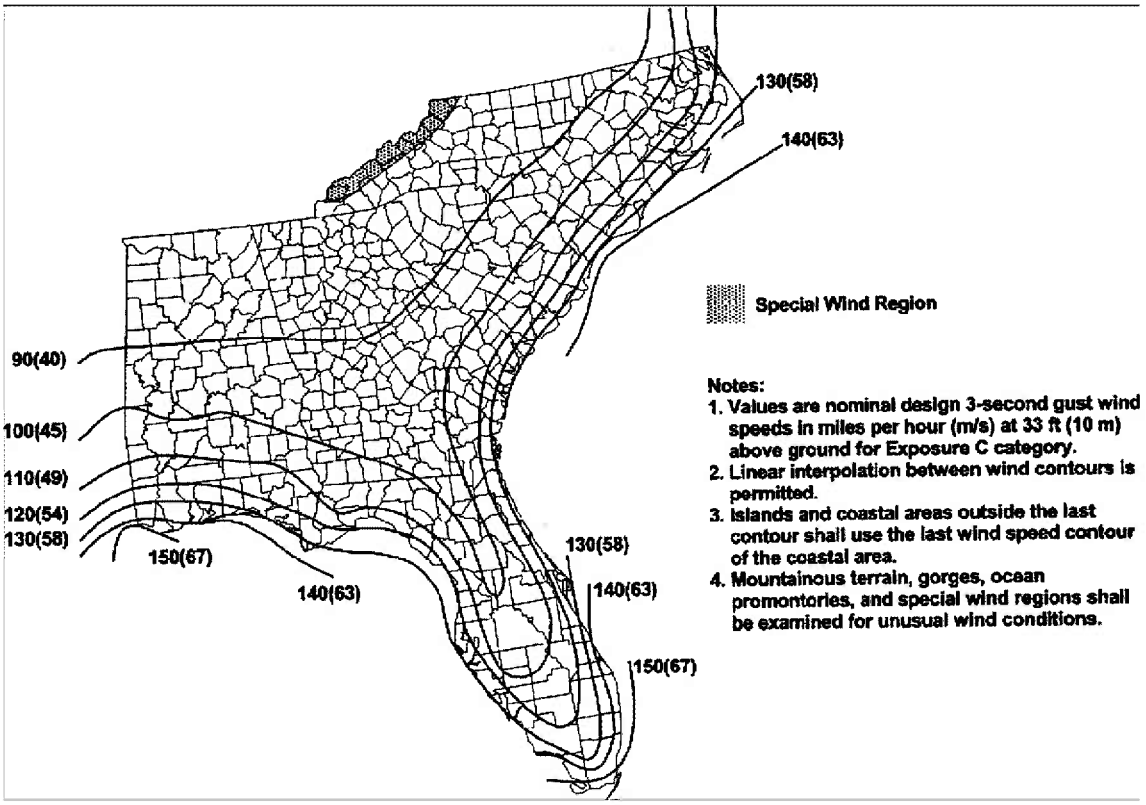

Fig 250-2(d)
Eastern Gulf of Mexico and Southeastern US Hurricane Coastline

[3] Figure 250-2(d) refers to "3-second gust wind speeds", which is approximately 20% greater than the 1-minute average wind speed used as the basis for categorizing hurricane levels by the Saffir-Simpson Hurricane Scale.

2.3 Grades of Construction

Section 24 of the NESC defines three Grades of Construction intended to distinguish between various situations, requiring varying levels of reliability, as implemented by the overload factors described above. In general, these grades depend upon the combination of voltage levels present in the power and communications conductors supported on the same poles, as well as various details, as specified. Most distribution poles carrying "primary power" (> 750 volts) at the upper portion of the pole, and communications cables below, are in the Grade C category. If the adjacent lines cross railroads tracks or limited access highways, a greater reliability level is required, corresponding to Grade B. Most power utility-owned poles are in the Grade C category.

The third grade of construction is Grade N, and applies if the voltages do not exceed 750 volts, corresponding to the lowest level of reliability.[4] This includes joint-usage poles supporting only "secondary power" (< 750 volts) or poles supporting only telecommunications cables.

The NESC does not provide specific storm loading or strength requirements for Grade N structures. NESC Section 25 (Loadings for Grades B and C) is not applicable to Grade N, and Section 26 (Rule 263) only states that "[t]he strength of Grade N construction need not be equal to or greater than Grade C" and that "[p]oles used for lines for which neither Grade B nor C is required shall be of initial size or guyed or braced to withstand expected loads, including line personnel working on them." This lack of specificity for Class N poles allows wide variability in application with respect to selecting appropriate pole strengths to withstand storms.

2.4 Required Strength & Pole Class

Based upon the wind pressures corresponding to the storm loads, as applicable, an appropriate strength pole may be selected. Wood pole sizes and strengths are specified in *ANSI O5.1, Wood Poles, Specifications and Dimensions*. ANSI-O5.1 provides a pole classification system based upon the ability of a pole to withstand lateral loads placed near the top of the pole, in a cantilever situation, such as may correspond to transverse wind loads on a pole with attachments. For example, a popular size Class 4 pole would typically (on the average) withstand a lateral load of 2,400 lbs applied 2 feet from the tip of the pole. A Class 3 pole is stronger, and would withstand 3,000 lbs. Within poles of Class 1 - 10, lower class number poles correspond to stronger (*i.e.*, larger diameter) poles. (Poles of strength greater than Class 1, are classified as H1, H2, and so on) with strength increasing with the H-number.)

Thus, a pole may be described as that supporting a specific "grade" of construction, corresponding to a level of required reliability (Grade B or C), or by a "class" size which is selected to match the strength needed to achieve the required reliability level. The strength is determined and calculated based upon the specified loading details (ice buildup and/or wind speed), the number and size (diameter) of the attachments to the pole, the span length between adjacent poles, and the grade of construction (via the overload factors discussed above).

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[4] Grade B applies if the adjacent lines cross railroads tracks or limited access highways.

3. Upcoming and Future Editions of NESC

The 2007 edition of the NESC has recently been issued (August 2006) and is effective as of February 2007. Regarding storm loadings, several significant changes were introduced. Although Rule 250B was left unchanged, a new Rule 250D was added: "Extreme Ice with Concurrent Wind Loading." Similar to Rule 250C, Extreme Wind Loading, Rule 250D would only apply to structures exceeding 60 feet in height, exempting most distribution poles. In any case, this storm load would not have an impact in Florida due to the low associated ice (0-in.) and concurrent wind (30 m.p.h.) loads.

It is particularly interesting that Rule 250C has been modified for the common Grade C construction applications. In previous editions, the overload (design) factors for Grade B and C construction were the same, in spite of the greater implied reliability for the Grade B situations. This inequity was corrected in the 2007 edition by a *reduction* of as much as 25% in the effective design loads for Grade C construction. Thus, in contrast to possibly extending the Extreme Wind Loading to a larger category of structures and applications (*e.g.*, poles ≤ 60 feet height) the NESC requirements, where applicable, have been reduced. Nonetheless, there had been extensive effort and discussions regarding the possible extension of Rule 250C to structures of all heights, as described below.

3.1 Extreme Wind Loading -- Discussions

There is a seemingly eternal debate within the NESC Committee to consider eliminating the 60-foot exemption -- so that poles of all heights would then be subject to extreme wind loading. Such a revision was discussed within the NESC Committee with regard to the 2007 edition but, once again, was rejected. In fact, as described above, where applicable -- *i.e.*, poles taller than 60 feet -- the design requirement for Extreme Wind was actually reduced in severity for Grade C construction.

The rationale for rejecting consideration of extreme winds for "distribution" poles (*i.e.*, poles < 60 feet tall) is that the vast majority of industry experiences indicate that almost all damage to such lines is caused by wind-blown debris such as falling branches, and not by the wind forces acting directly on the wires and poles. In that case, little would be gained by attempting to design such poles to withstand the direct hurricane wind forces. The NESC Loading Section (NESC Section 25) does not explicitly use the term "distribution" when referring to these applications, but the 60-foot height threshold was chosen intentionally to exclude the vast majority of such poles. (In contrast, taller structures, such as critical transmission towers, would benefit from such a requirement.) In addition, to the best of my knowledge, the NESC Committee has never discussed extending any of the storm loads of Section 25 of the NESC (*i.e.*, Combined Ice and Wind or Extreme Wind) to Grade N applications, including telecommunications-only poles or joint-use poles with only secondary power (< 750 volts). Thus, the proposal of the PSC to extend Rule 250C to all distribution poles, regardless of height or grade of construction, would appear to be a major departure from present considerations in the NESC Committee, or industry in general. Thus, it would not appear to be "reasonably practical, feasible, and cost-effective" (to quote from proposed Rule 25-6.034(5)) to attempt to apply Rule 250C to Grade N joint-use distribution poles.

Related discussions within the NESC Committee to extend the Extreme Wind loading to structures of all heights (including distribution poles), focused on a particular change proposal, developed within Working Group 5.8, that would limit the impact of such an otherwise potentially dramatic change. In particular, for the Light Loading District portion of the country, which includes Florida, there would be no impact for distribution structures. However, based upon a multitude of industry comments objecting to even this diluted version of an Extreme Wind requirement for distribution poles throughout the country, this proposed change was not incorporated into the 2007 edition. It may be expected that this (rejected) change proposal will serve as a starting point for similar considerations for the 2012 edition of the NESC.

3.2 Future NESC Meetings (2012 Edition)

Although the 2007 edition of NESC is being issued essentially as this report is being written, efforts on the development of the subsequent 2012 edition are already being anticipated by Subcommittee 5. Due to the general interest in the effects of storm loads, such as hurricanes, and the effort required to properly consider the various aspects, Subcommittee 5 typically begins its meetings considerably earlier in the code cycle than most other subcommittees. Thus, initial meetings for development of the 2012 edition probably will begin in 2007. As a precursor, Working Group 5.7 of Subcommittee 5 (chaired by myself) will hold a panel session in January 2007 for the benefit of interested members of the power industry (IEEE Power Engineering Society, TP&C Subcommittee). The panel session will address the changes adopted in the 2007 edition, but will also discuss some of the proposals that were not accepted. The proposed (rejected) changes to Rule 250C, including the proposed extension to distribution structures, will be of particular interest, and will likely generate comments to be considered in the development of the 2012 edition.

4. Impact of Extending Rule 250C

The unlimited application of Rule 250C to all poles would have a major impact on the cost and operations of the utilities and the third party attachers, and would likely significantly affect the system reliability and restoration efforts, as well as public safety -- albeit not necessarily in the manner expected by the PSC.

4.1 System Cost

For electric utility-owned joint-use Grade N, Grade B or Grade C pole applications, the additional pole costs will depend upon the extent to which the proposed Extreme Wind load would exceed "reasonable" (albeit non-mandated) Grade N loads, and the already required Combined Ice and Wind load for Grade B or C applications for poles not exceeding 60 feet in height. Any increased strength requirement leads to stronger (larger diameter) poles, or a correspondingly greater number of poles (resulting in shorter span lengths), both of which would obviously be more expensive.

Figure 1 illustrates the relative pole strength in comparison to that currently required for the common Grade C joint-usage distribution application; *e.g.*, including primary power

(> 750 volts) with telecommunications cables mounted below the power cables.[5] Assuming the pole does not exceed 60 feet in height (65 feet in length[6]), such a pole must be designed to the present Combined Ice and Wind Loading (NESC Rule 250B, Figure 250-1, Tables 250-1, 253-1 and 261-1A). For present purposes, a tangent line (no corner angles) is assumed, for which the design is based upon the ability to withstand the transverse wind loading. For Florida, located in the NESC Light Loading District (Figure 250-1), this corresponds to a wind speed of approximately 60 m.p.h., but with an additional overload/design factor of approximately 2-to-1 for Grade C, and 4-to-1 for Grade B. For Grade N, a 1-to-1 design factor is conveniently ("reasonably") assumed. For the proposed application of Extreme Wind requirements (NESC Rule 250C), the wind-speed for Florida ranges from less than 100 m.p.h. (assumed to be 95 m.p.h.) in north-central area, to as much as 150 m.p.h. at the southern tip.[7]

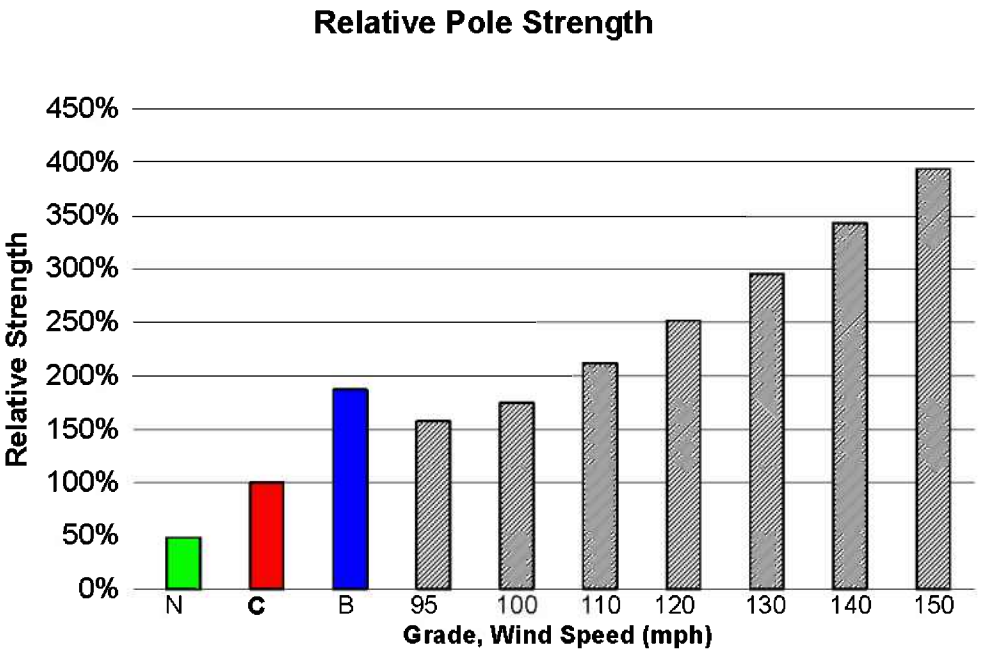

Figure 1
Relative Distribution Pole Strength vs. Typical Grade C Strength Requirements (NESC-2002)

The three solid bars to the left side of Figure 1, labeled "N", "C" and "B", depict the relative magnitude of the present required pole strength for a Grade N, Grade C, or

[5] Grade B construction would typically be limited to special situations (such as railroad crossings and limited access highways).
[6] Wood poles are available in 5 foot increments, and are buried at a depth of 10% the length plus 2 feet, with a slightly greater depth for poles shorter than 40 feet; *e.g.*, a 40-foot pole is buried at a depth of 6 feet, resulting in a 32 feet height above ground. (See ANSI-O5.1 wood pole standard.)
[7] A pole length of 40 feet is assumed. This parameter has only a minor effect on the results.

Grade B application. The seven cross-hatched bars to the right depict the relative magnitude of the required pole strength (which under the proposed rule would be the same for Grade N, C and B poles) due to Extreme Wind loads, at the wind speed indicated, should Rule 250C be directly extended to such applications. The results in Figure 1 thus show that the increased loading for an otherwise Grade C pole may be *increased* by a minimum of 50% (95 m.p.h.) or possibly as much as 300% (150 m.p.h.). In other words, the required strength, or number of poles, would be at least 1½ times -- and possibly as much as four times -- that currently required. For a Grade N pole application, the required strength would be at least three times -- and possibly as much as eight times -- a present reasonable design requirement. For the less common Grade B applications, the impact would not be realized for wind speeds less than 110 m.p.h. Nonetheless, significant strength increases would be required for wind speeds exceeding 110 m.p.h., which are characteristic of significant portions of Florida, as shown in Figure 250-2(d).

Figure 2 illustrates the corresponding pole class that would be required, assuming a Class 4 pole is necessary for the reference Grade C application, and the same number of poles (or span length) is maintained. Similar to Figure 1, the three solid bars to the left side of Figure 2 depict the representative pole class for a Grade N, Grade C, or Grade B application. The seven cross-hatched bars to the right depict the required class pole corresponding to the PSC proposed application of the Extreme Wind loads (which would be the same for Grade N, C and B poles). A minimum increase of three class sizes (to Class 1) for Grade C would be required for the minimum 95 m.p.h. wind, and as much as eight class sizes (to Class H5) for the 150 m.p.h. case. A Class 7 pole would otherwise suffice for the Grade N construction. As above, the Grade B applications would be affected to a lesser degree, but the increased size would still be significant for wind speeds above 110 m.p.h.

The increased pole material costs, including shipping and storage, are directly related to the number of poles or pole size (class). For larger, stronger poles, increased installation costs for the heavier poles may also be anticipated. Furthermore, the availability of such larger size (diameter) poles may be an issue.

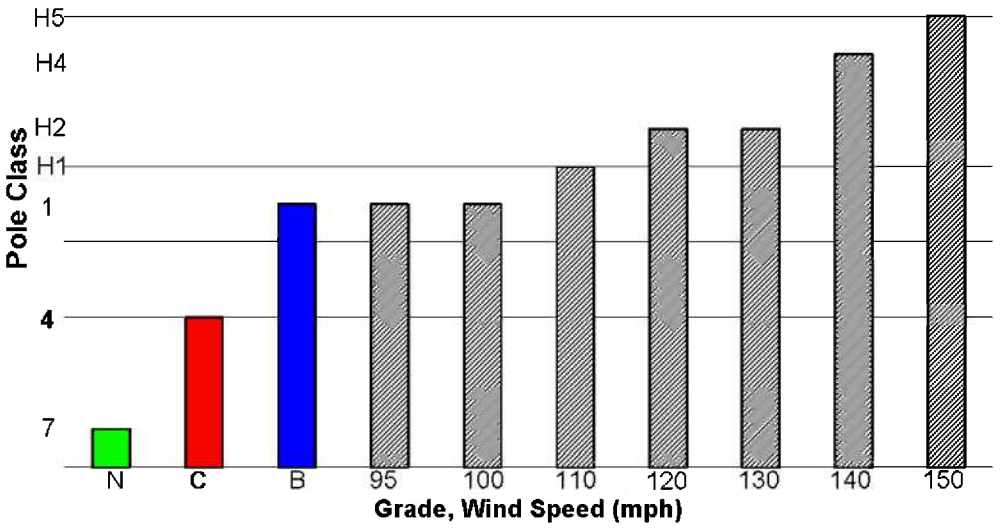

Figure 2
Required Distribution Pole Class vs. Typical Grade C Strength Requirements (NESC-2002)

4.2 Unintended Consequences

The imposition of the Extreme Wind requirement may result in unfortunate "unintended consequences," as sometimes occurs when changing long-standing practices that have generally been deemed successful. For example, as discussed above, the increased pole strength requirement would result in significantly stronger (stouter) poles or a larger number of more conventional size poles, corresponding to shorter spans. Such a practice would have a direct and negative impact on vehicular safety, and conflict with the objectives of the U.S. Department of Transportation, and presumably that of the DOTs of many states. The U.S. DOT is attempting to minimize the number of utility poles in order to reduce the incidence and severity of vehicular accidents. A greater number of poles, or stouter poles, would be contrary to such objectives. Thus, an attempt to modify a national safety code (*i.e.*, the NESC) to accomplish one objective may actually compromise public safety.

Other unintended consequences may also result from the introduction of the proposed Extreme Wind loading, due to a possible significant increase in the number of installed distribution poles along a given route. The June 8, 2006 Florida PSC Memorandum (page 5, Rollins) describes the likelihood that the supposedly less loaded individual poles would nonetheless be damaged in a hurricane, caused by the wind-blown debris and branches, resulting in the much more difficult, and time-consuming, recovery process to repair or reinstall many more poles.

Still another negative consequence relates to the engineering support associated with the implementation of the proposed Extreme Wind loads. The determination of the corresponding wind force is considerably more complicated than that of the existing transverse wind force based upon the present required Combined Ice and Wind loading. While such calculations are generally within the capability of experienced transmission engineers, with civil engineering training, they are beyond that of most distribution engineers. Indeed, one of the change proposals submitted for the 2007 edition was an attempt to simplify the engineering implementation of the Extreme Wind loads for even the applicable transmission applications. Although new or available software packages may alleviate the burden, there will be inevitable confusion and delays -- as well as possible errors in implementation -- in the design and installation of new facilities (including Verizon's fiber-optic networks), to the detriment of the consumers.

5. Recommendations

My primary recommendation is that the Commission not alter the manner in which the NESC's extreme wind loading standards are applied. The NESC is a well-respected document that is generally recognized as having served the industry and public well. For this reason, the NESC Committee (*e.g.*, Subcommittee 5, Strength & Loading) generally attempts to introduce significant changes in a gradual, evolutionary manner, in order to avoid or minimize the potential impact, including unintended negative consequences such as described above (Section 4.2). Thus, previous discussions within the NESC Committee (see Section 3.1 above) to extend the Extreme Wind loading to structures less than 60 feet tall (distribution poles), focused on a particular change proposal, developed within Subcommittee 5, that would limit the impact of such an otherwise potentially dramatic change. In particular, for the Light Loading District portion of the country, which includes Florida, the impact would have been insignificant. Nonetheless, based upon a multitude of industry comments objecting to even this diluted version of an Extreme Wind requirement for distribution poles throughout the country, this proposed change was not incorporated into the 2007 edition of the NESC.

Ideally, the Florida PSC should wait until the next code cycle of the NESC (2012 edition) before encouraging or requiring consideration of the NESC Extreme Wind loading. The related discussions within the NESC Committee during the development process would take into account the experiences during Hurricane Wilma, as well as other recent serious storms. Florida Power & Light, in particular, is well-represented on NESC Subcommittee 5. If the Florida PSC decides to change how the NESC's Extreme Wind loading standards are applied, it should be very cautious in the manner in which such a dramatic, controversial change is introduced. At the least, the Commission should attempt to limit the otherwise dramatic impact to as small a category of facilities as possible, or to reduce the magnitude of the impact. Thus, my alternative recommendation, in the event the Commission moves in this direction, is as follows:

- The proposed PSC rule should limit its scope to Grade B or Grade C applications of electric-only or joint-use poles owned by the electric utilities. Thus, Grade N applications -- which include joint-use poles with only secondary power (< 750

volts), as well as several categories of electric-only poles -- should be explicitly excluded from the proposed application of Rule 250C.

- The application of the NESC Extreme Wind load, as presently specified in NESC-2002, Rule 250C, should be modified to limit the quantitative impact to the affected distribution poles. For example, the reduced loads for Grade C construction incorporated into the latest (2007) edition of the NESC should be explicitly cited as consistent with the intent of PSC Rule 25-6034. For Grade C construction, the corresponding wind forces are reduced by as much as 25% compared to NESC-2002. NESC-2007 is being issued in August 2006, and is effective within six months (February 2007).
- The proposed PSC rule, preferably as modified above, should be applied on a trial basis, initially limited to a specified geographic area and a defined period (*e.g.*, 1-2 years), in order to better understand the potential benefits and consequences of such a rule.

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APPENDIX 2
About Outside Plant Consulting Services, Inc. (OPCS)
(Dr. Lawrence M. Slavin)

Outside Plant Consulting Services, Inc. (OPCS) was established in the year 2002 to help meet the needs of the telecommunications and power industries in establishing standards, guidelines and practices for outside plant facilities and products. The OPCS Group provides related support services for field deployment, and product evaluation and analysis. Dr. Lawrence (Larry) M. Slavin, Principal of OPCS, has extensive experience and expertise in such activities, based upon his many years of service at AT&T/Lucent Bell Telephone Laboratories (Distinguished Member of Technical Staff) in telecommunications product design and development, followed by a career at Telcordia Technologies (Bellcore) in its research and professional service organizations.

As Principal Consultant and Manager/Director of the Network Facilities, Components, and Energy Group at Telcordia, Dr. Slavin was responsible for professional services related to the telecommunications industry. These activities included technical leadership in developing installation and construction practices and "generic requirements" documents, introducing new construction methods, and performing analyses on a wide variety of technologies and products (such as poles, duct, wire and cable, electronic equipment cabinets, flywheel energy storage systems and turbine-generators). Throughout his long career, he has had a leading role in the evolution of many telecommunications related fields and disciplines -- including aerial and buried plant design and reliability; advanced construction and cable and duct placement techniques, copper pair, coaxial, and fiber-optic technology; flywheel energy storage systems; physical design and development of hardware and electronic and electro-optic systems (such as the "SLC 96" digital loop carrier); cable media and equipment reliability studies; exploratory fiber-optic hardware development; and systems engineering.

Dr. Slavin is a member of several subcommittees of the National Electrical Safety Code Committee, responsible for specifying safety standards for aerial and buried telecommunications and power facilities in the United States. He is also an active member and participant on the Accredited Standards Committee ASC-O5 ("ANSI-O5") for wood poles and products, as well as on several related committees of the American Society of Civil Engineers. In addition, Dr. Slavin is a Charter Member of the North American Society for Trenchless Technology, has been instrumental in the development of directional drilling standards, and directly supports training activities for the directional drilling industry at the Center for Underground Infrastructure and Research and Education (CUIRE) at Michigan State University. Specific present and recent industry activities are listed below.

Industry Activities

- **National Electrical Safety Code Committee**
  - Represents the national telephone industry, via Alliance for Telecommunications Industry Solutions, ATIS
  - Executive Subcommittee
  - Main Committee
  - Subcommittee 4 (Overhead Lines – Clearances)
  - **Subcommittee 5 (Overhead Lines – Strength & Loading)**
  - Subcommittee 7 (Buried Lines)
- **Accredited Standards Committee ASC-O5**
  - ***ANSI O5.1, Wood Poles, Specifications and Dimensions***
  - *ANSI O5.2, Wood Products, Structural Glued Laminated Timber for Utility Structures*
  - *ANSI O5.3, Wood Products, Solid Sawn-Wood Products and Braces*
- **Pole Reliability Based Design (RBD) Committee, ASCE**
  - ***Reliability-Based Design of Utility Pole Structures***
- **Distribution Pole Standard Committee, ASCE**
- Committee F17 on Plastic Piping Systems, ASTM
  - Subcommittee F17.67 on Trenchless Plastic Pipeline Technology
  - Task Group Leader for development of HDD Standard ASTM F1962
  - *ASTM F1962, Standard Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit Under Obstacles, Including River Crossings*
- Trenchless Installation of Pipelines (TIPS) Committee, ASCE
  - *ASCE Manual of Practice for Pipe Bursting Projects*
- Center for Underground Infrastructure and Research and Education (CUIRE) at Michigan State University
  - Industry Advisory Board
- Trenchless Technology Center, Louisiana Tech University
  - Industry Advisory Board
- North American Society for Trenchless Technology (NASTT)
  - Charter Member
  - Chair of Directional Drilling Subcommittee
- Missouri Western State College
  - HDD Steering Committee