

Henwood, Crystal D

From: Board, NSUARB
Sent: Tuesday, January 27, 2015 6:32 AM
To: Friis, Doreen
Cc: Henwood, Crystal D
Subject: FW: NS Power Website - Matter Number M06321
Attachments: EXHIBIT_ONE-NS-Power-outage-report-2015jan25-0143h.jpg; EXHIBIT_TWO-NS-Power-outage-report-failed-validation-2015jan25-0139h.jpg; EXHIBIT_THREE-NS-Power-outage-report-failed-validation-2015jan25-0139h-green.jpg

From: Ivan Smith [smith1398@gmail.com]
Sent: January-27-15 1:17 AM
To: Board, NSUARB
Subject: NS Power Website - Matter Number M06321

Re: Matter M06321 - Review of NS Power's Storm Response

Dear Utility and Review Board:

The rain and wind storm that passed over Nova Scotia on the night of January 24-25, 2015, provided an opportunity for citizens to see how the revamped NSPI website works under real storm conditions.

The "revamped" website referred to is described in some detail on pages 10 and 11 of the report by Liberty Consulting Group (LCG) titled *Post-Tropical Storm Arthur: Comments on NS Power's Storm Response Reports* dated December 15, 2014, which is available in the Board's website as Exhibit **LCG** in Matter M06321.

I note that this revamping of the NSPI website has only been partially implemented, and is not expected to be completed until early summer 2015.

At this time, my attention is particularly directed to the part of LCG's report captured in the following quote:
(NS power) "has optimized outage mapping application software as well. In November 2014, NS Power successfully completed internal stress tests of the outage page, simulating a load test of 360,000 page requests per hour... NS Power reports that the site remained stable throughout the test. These test results represent a significant improvement over website performance during Arthur, when the outage mapping website began failing at 50,000 page requests per hour. NS Power has also brought its main website (nspower.ca) back in-house. An external vendor previously hosted the nspower.ca website. Moving the site in-house increases responsiveness, given that many visitors navigate to the outage map through the main website..."

In this LCG report, there is no mention of an aspect of the NSPI website that I believe to be of significance to the future operation of this website, as it is accessed by citizens with a variety of browsers supplied by several different software companies with differing corporate cultures and differing design philosophies.

"...NS Power has...brought its main website...back in-house..."

This means that NSPI has now taken full responsibility for all aspects of the ongoing maintenance and updating of its website.

At this time, my attention is directed to the production stage of the NSPI website at which basic design decisions are made. In particular, what plan, if any, has been made to accommodate the fact that it will be accessed by citizens with a variety of browsers supplied by several different software companies with differing corporate cultures and differing design philosophies?

That is -- is the NSPI website now being explicitly designed to work properly with any and all of the five major browsers now in use by the citizens of Nova Scotia?

These five browsers are Chrome (42.5%), IE (17.6%), Firefox (15.6%), Safari (14.6%) and Opera (3.2%), listed here in order of their respective world-wide usage statistics for December 2014. as reported by a respected organization "W3C statistics" <http://www.w3counter.com/globalstats.php>

If the NSPI website **now is not** (as I believe) being designed to work properly with all five of the main browsers now in use by the citizens of Nova Scotia (as appears to be the case, see below), what plan, if any, does NSPI have for making suitable adjustments to its website design policies?

Of course it would be better to base design decisions for a website (NSPI) intended for public use by Nova Scotians on actual browser penetration statistics among Nova Scotians, but I do not have this information. No doubt NSPI does have ongoing monthly records of browser usage by the people who access the NSPI website. Perhaps the UARB might give consideration to asking NSPI for data about recent month-by-month browser usage by the people accessing the NSPI website. This information should be public; I see no reason for confidentiality.

The rain and wind storm that passed over Nova Scotia on the night of January 24-25, 2015 provided a rare opportunity for me -- in fact for anyone with an Internet connection and the equipment and knowledge to perform the validation test (described below) -- briefly to glimpse the internal working of the NSPI website.

During this storm, there was a power outage, affecting my area, of more than three hours duration -- which my information indicates was due to a problem on the 69kV transmission line from Hells Gate to Hillaton (Canning) substation. This power failure began about 9:40pm January 24 Saturday, and ended about 12:58am January 25 Sunday. It affected my home in Canning, and

other communities in the area supplied by the Hillaton substation such as Kingsport, Scott's Bay, Bennetts Bay , etc.

On January 25 Sunday, when power was restored to my area at 12:58am, there was a brief -- about two hours -- opportunity for me to use my computer to observe the NSPI Outage Map website operation **while it was displaying a list of actual power outages**.

Normally, there are no power outages to report, and thus the performance of the Outage Map cannot be observed in any browser.

The performance of the Outage Map -- as it generates screen displays for a variety of Nova Scotians using a variety of browsers -- can only be observed during a time when there is a list of actual outages.

Soon after power was restored in my area, I went to my computer to see what was being displayed by the NSPI Outage Map.

I used this rare opportunity to take two screenshots, which are attached below.

EXHIBIT ONE is a screenshot showing the list of five outages then existing across Nova Scotia, as reported to me by the NSPI website.

EXHIBIT TWO is a screenshot showing the report of W3C validation test of the NSPI website as displayed in Exhibit One. This screenshot shows **multiple coding errors in the NSPI website**, as reported by W3C.

EXHIBIT THREE is a screenshot, identical to Exhibit Two but with the **coding errors** outlined in green for easier identification.

There is an important distinction here -- these are not factual errors.

These are the software equivalent of grammar and syntax errors.

This validation test is not concerned whether the outages reported by the NS Power Outage Map do in fact exist, or if they do exist, is their location and extent factually correct.

This validation test looks only at the software equivalent of what is commonly called "grammar" and "syntax" in language. Does the computer language sent from the NSPI server to the destination computer or device contain grammar or syntax errors that make it difficult for the destination device to understand the instruction?

In this case, the computer language (HTML and CSS) sent from the NSPI server to all destination computers or devices contains multiple errors -- here called "coding errors" as shown in Exhibits Two and Three (attached).

This raises an important question -- not addressed in any report received so far by the UARB about the performance of the NSPI website.

Who decides what is or is not a coding error?

Who is the ultimate final authority on HTML and CSS software?

Most pages on the World Wide Web are written in computer languages (such as HTML) that allow Web authors to specify what appearance the screen display presented to the viewer should have. As for every language, these have their own grammar, vocabulary and syntax, and every document written with these computer languages are supposed to follow these rules. However, just as texts in a natural language can include spelling or grammar errors, documents using markup languages may (for various reasons) not be following these rules. The process of verifying whether a document actually follows the rules for the computer language(s) it uses is called validation, and the tool used for that is a validator. A document that passes this process with success is called valid. "Validation" can be defined as the process of checking a Web document or website against the rules of the grammar it claims to be using.

http://validator.w3.org/docs/help.html#validation_basics

The World Wide Web Consortium (W3C) is the organization that defines the components of HTML (the computer language used by NS Power to implement its website). Thus W3C is considered by most software specialists to be the ultimate final authority (the software equivalent of the Supreme Court) in making decisions whether the HTML used to implement any given website is, or is not, free of errors.

That is, whether or not the website HTML is "valid."

The Consortium (W3C) is jointly administered by the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL, located in Building 32 on the MIT campus in Cambridge, Massachusetts), the European Research Consortium for Informatics and Mathematics (ERCIM) (in Sophia Antipolis, France), Keio University (in Japan) and Beihang University (in China). The W3C also has World Offices in sixteen regions around the world.

http://en.wikipedia.org/wiki/World_Wide_Web_Consortium

I used the W3C validation test to obtain the result shown in Exhibits Two and Three (attached).

Respectfully, I request the Utility and Review Board to consider asking Nova Scotia Power to provide its answer to the following two-part question, which I believe is relevant to any official review of the performance of the NSPI website:

Does NS Power accept W3C as the ultimate final authority in deciding whether its website is or is not free of coding errors? If not, what organization or entity does NS Power consider to be the ultimate final authority in deciding whether its website is or is not free of coding errors?

Sincerely,

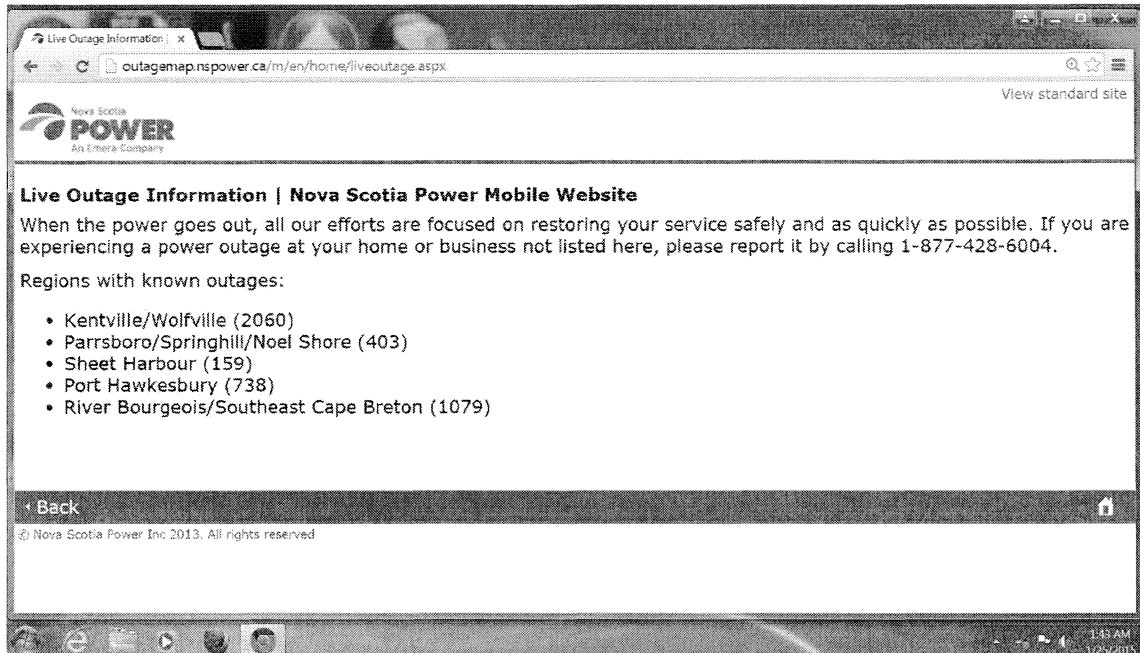
Ivan Smith
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Canning, Nova Scotia B0P 1H0
902-582-1321

Exhibit 1

NS Power Outage Map

January 25, 2015

1:43am



The screenshot shows a mobile browser window with the URL outagemap.nspower.ca/m/en/home/liveoutage.aspx. The page features the Nova Scotia Power logo (An Emera Company) and a heading "Live Outage Information | Nova Scotia Power Mobile Website". The main content area contains a paragraph about power restoration efforts and a list of regions with known outages. The browser's address bar, back button, and home button are visible at the top. The Windows taskbar at the bottom shows the time as 1:43 AM on 1/25/2015.

Live Outage Information | Nova Scotia Power Mobile Website

When the power goes out, all our efforts are focused on restoring your service safely and as quickly as possible. If you are experiencing a power outage at your home or business not listed here, please report it by calling 1-877-428-6004.

Regions with known outages:

- Kentville/Wolfville (2060)
- Parrsboro/Springhill/Noel Shore (403)
- Sheet Harbour (159)
- Port Hawkesbury (738)
- River Bourgeois/Southeast Cape Breton (1079)

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