



# BPCC

## NEW ORLEANS



June 2nd - 5th, 2024



New Orleans, US

# Creating Reader-Friendly Experiences in Bid Responses

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[Redacted]

[Redacted]



# But first ...

- Welcome to New Orleans!





## Who am I?

- 20+ years as editor in the technology publishing business (Macmillan, Pearson, Prentice-Hall)
- Author or co-author of 4 books; editor of hundreds
- Proposal Manager at Sensus USA since 2018
- Leverage publishing experience by applying it to the bid response world
- Win rate increase from 7% to 40%+



# What is User-Friendly?

- It's not *readability*
- *Readability* is more about the writing style, the organization of content, etc.
- Reader-*friendly* is readability's little brother – the *experience* of the reader:
  - Just as a web page can be easy to navigate, is your bid response easy to navigate? Any “blocks?”
  - What is your bid's “handle?”



## What the Experts Say

“People see what it looks like before they read what it says.”

“A well-designed document can be your best way to differentiate.”

“Communicate your strengths visually.”

“A great design can increase win rate 10-20%.”



## Before We Dive In ...

- ✓ These concepts are specific to using Microsoft Word
- ✓ These concepts assume your response isn't hindered by page-count restrictions
- ✓ These concepts assume your response isn't confined by the client's prescribed format (Excel!)
- ✓ These concepts assume your response isn't limited by using the client's templates

# Let's Dive In

1. The Basic Stuff
2. The Fun Stuff
3. The Spit and Polish

Goals:

- ✓ Anticipate your readers' needs
- ✓ Connect the dots for them



# 1. The Basic Stuff

But first, a caveat ...



# Provide a Table of Contents

- ✓ Especially helpful when submitting electronically
- ✓ Use descriptive headings
- ✓ Remember to update as final step!

## Table of Contents

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# Provide a TOC for Figures

- ✓ Also helpful when submitting electronically
- ✓ Write effective captions
- ✓ Remember to update as final step!

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# Provide a TOC for Tables

- ✓ Also helpful when submitting electronically
- ✓ Write effective headings
- ✓ Remember to update as final step!

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# Use Figure Numbers

- ✓ Avoids “above” and “below” flow issues
- ✓ Necessary for creating the Figures TOC

## • Our Phase Detection Solution¶

Phase Detection (Figure 17) is a patented solution that combines metrology, communication, and analytics to determine the distribution phase of meters installed throughout a utility's distribution grid. The functionality is embedded in existing Sensus infrastructure—no additional hardware is required.¶

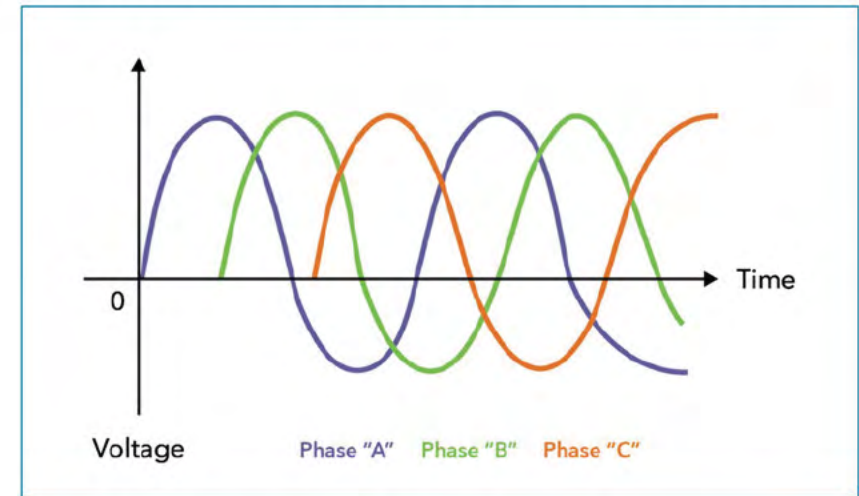


FIGURE 17: PHASE DETECTION WITH THE SENSUS STRATUS IQ ELECTRIC METER¶

Phase Detection, which is supported by the Sensus Stratus IQ electric meter, determines the phase of the



# Use Table Numbers

- ✓ Avoids “above” and “below” flow issues
- ✓ Necessary for creating the Figures TOC

All sensitive data at rest or in transit is encrypted using strong commercial-grade encryption protocols (such as TLS, SSH, and SFTP). This provides protection for all data exchanged and stored within the Sensus FlexNet solution. Sensitive data stored on the system is limited to cryptographic keys, and passwords. ¶

This protects the FlexNet system’s messages from being decoded or hacked. Table 2 shows how the FlexNet system protects from threat vectors. ¶

TABLE 2: SECURITY CONTROLS FOR CYBERSECURITY ¶

Threat ¶	Security Control ¶
Spoofing—Impersonating an authorized user or asset. ¶	All users and endpoints are validated using authentication and cryptographic keys before performing any actions within the system. This prevents spoofing by unauthorized entities. ¶
Brute Force Attacks—Performing an exhaustive search of all possible values for a security credential or attribute (such as a key, password, or passphrase). ¶	Endpoint—The FlexNet system operates on FCC-licensed spectrum. This provides a control against unauthorized communication within Sensus radio space. ¶ FlexNet Base Station and FlexNet Head End System—Each system is configured with account lockouts and firewall rules to prevent brute force attacks. In addition, third-party controls can be implemented to augment Sensus security controls. ¶
Bypass—Bypassing system security functions and mechanisms. ¶	Validation and verification are performed within the system for functions before the operation can be performed. This includes sessions, authentication, and authorization. ¶
Denial of Service—Overloading the network or system resources. ¶	Endpoint—The FlexNet system operates on FCC-licensed spectrum. This provides a control against unauthorized communication within Sensus radio space. ¶ FlexNet Base Station and FlexNet Head End System—Each system is configured with firewall rules to prevent DOS attacks. In addition, third-party controls can be implemented to augment Sensus security controls. ¶
Hijack—Commandeering one side of an existing authenticated connection. ¶	Session, authentication, and authorization are validated at an application layer to prevent session hijacking. At a network layer, AES-CCM provides a cryptographically verifiable CBC-MAC to ensure the communications have not been altered during transmission. Electric meters support digital signatures to provide an additional layer of protection. ¶



# Repeat Table Header Rows

- ✓ Readers won't have to scroll back to see column headings
- ✓ Prevents the dreaded "stop and think" block for readers

## ■ Aclara kV2c Electric Meter Alarms¶

The Aclara kV2c electric meter captures operational events in the meter's event log, including power-up and power-down, test-mode activation and deactivation, and demand reset. Table 5 describes alarms, errors, warnings, and resolutions generated by an Aclara kV2c electric meter.¶

TABLE 5: ACLARA-KV2C-ALARMS-GENERATED-BY-METER¶

Alarm¶	Meaning¶	Frequency¶
Bad password¶	The number of allowable password attempts has been exceeded.¶	Weekly alarm message.¶
Battery and Potential fail¶	Meter lost voltage and a battery is not connected or has failed. (This warning is expected on meters without a battery.)¶	Weekly alarm message.¶

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Alarm¶	Meaning¶	Frequency¶
Clock Error¶	The meter's clock stopped.¶	Weekly alarm message.¶
Demand Overload¶	The demand value is higher than the programmed value.¶	Weekly alarm message.¶



# Provide Helpful Info in Footers

- ✓ Customize as you see fit
- ✓ Complementary – be informative but don't overdo it with clutter

Because of the long-range transmission capability of the FlexNet system, minimal infrastructure is required to provide full service area coverage. The proposed FlexNet system for BEA requires only four base stations, minimizing your initial expense and reducing long-term costs by eliminating the need to maintain additional infrastructure over the 20-year life of your system. By requiring fewer network devices, the lifecycle cost of a FlexNet system is significantly lower than competing systems. As an example, when the batteries in the AMI network devices need to be replaced, there are a lot fewer network devices to visit in a FlexNet system. Additionally, you do not need to roll a bucket truck to service our base stations, thus saving you additional operational costs for the life of the system.

<https://sensus.com>

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# Present Text in Tables and Lists

- ✓ Bulleted lists
- ✓ Numbered lists
- ✓ Look for opportunities to create tables

▪ *Indicate whether the AMI system is capable of delivering power outage, low battery and tamper alarms as applicable from the meter to the head end. Indicate whether the AMI system has low voltage alarm detection capability at the meter.*

Yes, FlexNet delivers these alarms, as well as several more. Please see Table 4 and Table 5. Our market-leading power outage alarm solution and power restoration alarm solution features two key features:

1. → Our base stations include on-board battery backup, which enables base stations to operate normally for up to eight hours.
2. → The meter's FlexNet transceivers include on-board supercapacitors that enable outage alarm reporting for 10 minutes following an outage.

As a result, the FlexNet system provides the best information to your field crews on the best locations to deploy your storm crews and get your customer's lights back on faster.

Office: (231) 487-1315  
Cell: (231) 675-0007



- Backfill
- Encryption
- Communication



# Use Borders Around Figures

- ✓ Cleans up the look and feel
- ✓ Provides uniform look and feel

## FlexNet System Outage Reporting Process

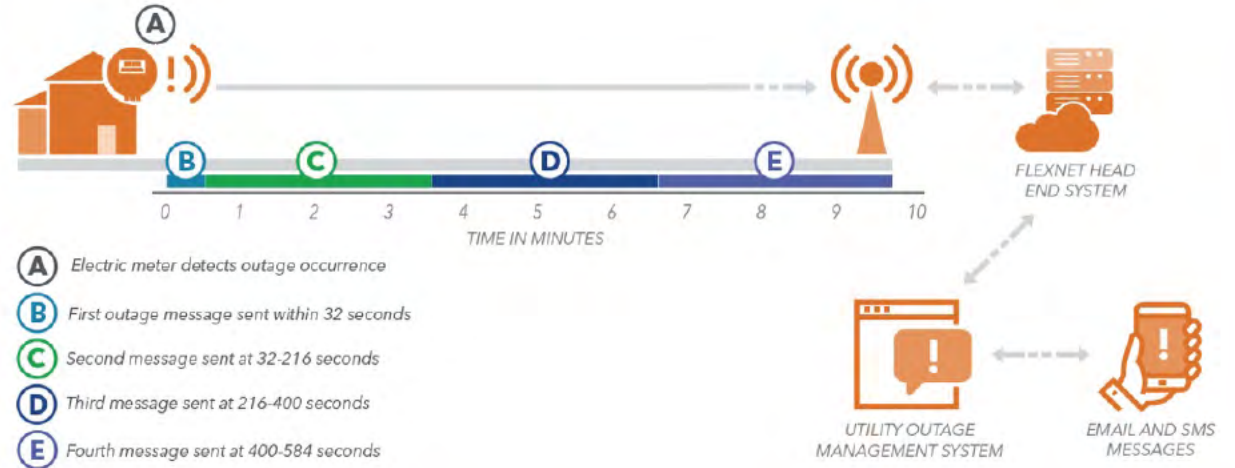


FIGURE 16: FLEXNET SYSTEM OUTAGE REPORTING

FlexNet Base Stations communicate wirelessly over FCC-licensed, primary-use radio frequency spectrum. The FlexNet system uses a point (base station)-to-multipoint (endpoint) network architecture.



FIGURE 4: FLEXNET SYSTEM ARCHITECTURE



## 2. The Fun Stuff

[Redacted]

[Redacted]

[Redacted]

[Redacted]



# Design a Cool Cover Sheet

- ✓ Create a “clean” look
- ✓ Allow white space
- ✓ Use graphics





# Design a Cool Cover Letter Template

- ✓ Use testimonials
- ✓ Use headings
- ✓ Emphasize contact info



## The industry's most reliable AMI network


The FlexNet network exceeds Service Level Agreements (SLAs) for each of our more than 1,400 deployed networks in North America – with far less network infrastructure and at a much lower cost than competitive solutions. Sensus RF engineers will design your FlexNet system specifically for your service area and will commit contractually to the design's performance. Our deep experience designing FlexNet systems along with our attention to detail provides you with the best performing AMI system now and in the future.

## A commitment to you as a long-term partner

The FlexNet system we have proposed for you is designed to provide cutting-edge solutions for at least 20 years – and we plan to be with you every step of the way, delivering on your needs for both today and the future. We have an excellent track record of working with our customers via the Sensus Partner Advisory Network (SPAN), a customer-led organization that empowers our customers to communicate and share successes and challenges as well as to have a voice in the development and expansion of the Sensus products. SPAN provides us with extremely valuable feedback regarding our hardware, software, and services.


We are committed to helping you meet your AMI goals of reading your entire meter population and providing plenty of bandwidth to manage future growth. FlexNet also seamlessly integrates with your current and future billing, outage management, and GIS applications.

Toby Smith, Director of Sales – NA Energy, will be your primary contact throughout the proposal evaluation and next steps.

Primary Contact	Alternate Contact
	

We look forward to partnering with OMU to deploy and support a high-performance AMI system designed to meet your AMI goals for the next 20 years – and beyond.

Best regards,






# Design a Classy Bid Response Template

- ✓ Provides clean, easy navigation of bid requirements and responses
- ✓ Supports your effort to present a package of info that is well organized and highly detailed

- Confirmation that your company and personnel are legally allowed to work in the state of Michigan. ¶

Our company and personnel are legally allowed to work in the state of Michigan. ¶

- The company's capital position and financial health. Provide annual reports and/or financial statements for the division of the company directly responsible for the product or services proposed in this RFP for each of the last three fiscal years as an appendix. ¶

Sensus is a Xylem brand (XYL (NYSE)), which is headquartered in Washington, DC. ¶

Sensus' financial standing, as well as that of our parent company Xylem, is extremely strong. Sensus is part of Xylem's Measurement and Controls division, which had 2023 revenues of approximately \$1.73 billion, which is approximately 25% of Xylem's overall 2023 revenue of \$7.36 billion. ¶

Xylem's financial statements, including annual reports, 10-K and 10-Q reports, are available on Xylem's investor page: <https://www.xylem.com/en-us/investors/financial-information/>. Sensus is shown as a reporting unit of Xylem, Inc. in the 10-K. ¶

- State whether there are pending or prior legal disputes or lawsuits with any existing or previous clients. If so, state all such disputes, including dates, as well as any facts and outcomes regarding these disputes. ¶

Sensus is a global corporation, and, as such, is involved in any number of disputes at any given time. In all these cases, we work proactively to resolve issues as they arise with utmost attention to the customer's needs and concerns, almost always solving problems with a commercial resolution. None of these disputes materially affect the services, products, and equipment to be provided under the scope of this proposal, if awarded. ¶



# Design a Client Objectives Table

- ✓ Provides clear, concise visual that establishes a “Win” theme
- ✓ Place it front and center: use in Executive Summary, solution summary, etc.

TABLE 1: FLEXNET DELIVERS ON YOUR OBJECTIVES

Client Objective	FlexNet	Description
A robust bi-directional communications channel	✓	Sensus' industry-leading, two-way wireless AMI communication network consists of multiple synchronized, high-performance, 900-MHz, FCC-licensed, primary-use RF bands.
AMI system interfaces with MDM software	✓	Our Head-End System software can be integrated to existing utility systems (such as MDM, CIS, and SCADA, for example) to pass along data needed by these systems—both in real time (for alarms and events) and via large file transfers (for billing data).
Provides interval-capable meters (and collectors, if applicable)	✓	FlexNet uses a point-to-multipoint network design where the meters communicate directly to the network according to their programmed read intervals and transmission times. At the programmed time, meters transmit their billing reads to network base stations, which forward them immediately to the Head End System. These automatically transmitted messages deliver a variety of message types to the Head End System, including interval readings, daily register readings, load profile data, and alarm information.
Advanced meters deployed across the distribution network also function as network health monitors by reporting back distribution conditions	✓	FlexNet provides continuous self-diagnosis, reporting overall and individual device health to the Head End System and any integrated upstream systems. The Network Command Suite software application provides an intuitive platform to help you understand overall FlexNet communication network performance, while also providing the tools to pinpoint and diagnose issues of any type across the network quickly and easily.
AMI meters should serve as the platform devices for the entire grid modernization effort	✓	The meters in a FlexNet AMI system are edge devices that provide the utility with a wide variety of information to help your team monitor your grid in real time and enable 'in-the-field' actions when needed.



# Use a Compliance Visual

- ✓ Provides clear, “scannable” visual that continues your “Win” theme
- ✓ Aligns with the “Communicate Your Strengths Visually” strategy (BPC 2023)

*A.5.1.7. The AMI software must have the ability to alert appropriate personnel of certain triggered alarms.*

**COMPLY**

The Head End System stores all alerts it receives. We recommend that alerting and alarm rules be managed outside of the Head End System via our Utility Data Lake (UDL) database, analytics software, the Alarm Manager, or third-party offerings. The Head End System and UDL support email notifications.

## A.5.2 Analytics Software Provider

*A.5.2.1 What analytical applications are supported as a part of the proposal?*

**COMPLY**

Our solution supports our Utility Data Lake (UDL) analytics software as well as third-party analytical applications that can be integrated by our Professional Services team.

*A.5.2.2 Provide manufacturer specifications, quantities, pricing and delivery schedule of the proposed AMI head-end system and hardware.*

**COMPLY**

As previously noted, since you prefer an on-premise solution, your team must purchase the hardware, software, and third-party licenses for the system. Our vendors do not allow us to re-sell these items. Specifications and quantities are detailed in our response to requirement A4.4.

## A.6 Services

### A.6.1 Project Management Services

*A.6.6.1.1. The Vendor shall provide project management services for the AMI project. Describe the proposed project management team's capabilities and experience implementing AMI projects.*

**COMPLY**

The Sensus project team selected to oversee this deployment is committed to working onsite with you to fulfill the obligations of this engagement in a professional and timely manner. The team consists of qualified, experienced, and credentialed professionals from the Sensus Deployment Services, Professional Services, and Managed Services organizations. They hold certifications from leading institutions, including the Project Management Institute (PMI) Project Management Professional (PMP®) and Six Sigma, as well as Professional Engineer (PE) licensure from various states.



# Use Visuals to Reinforce your Message

- ✓ Points of emphasis
- ✓ Cross-references
- ✓ Keywords
- ✓ Pull-quotes
- ✓ Real-world examples
- ✓ Infographics

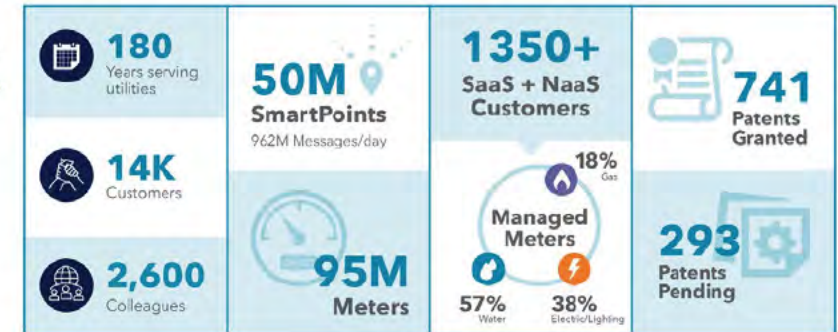
## Our Qualifications

Sensus has been a cornerstone in the metering industry for many years. As a global market leader for smart grid products and technologies, we are committed to helping the world's utilities reach farther with innovation in sensing and communication technologies, data analytics, and a broad portfolio of services.

The FlexNet system debuted in 2006 and is the backbone of more than 1,400 electric, water, and gas AML systems, supporting more than 50 million total endpoints and including more than 200 combination networks.

Every day, the FlexNet system delivers more than 962 million messages of critical data so utilities can provide better service to their consumers. Our longstanding success is rooted in our commitment to providing an ever-improving AML solution that is designed to meet our customers' current objectives as well as their future business needs.

Sensus is a brand of Xylem (XYL (NYSE)), which is headquartered in Washington, DC. Xylem owns a wide variety of brands that provide several innovative technology solutions to its customers.



This functionality is supported by the DA Automation Control software for managing DA endpoints in conjunction with the SCADA-Xchange software application that integrates our control and data acquisition functionality into your existing DMS and SCADA systems via our DNP3 protocol API. We work with all major DA/SCADA systems in North America.



# Use Special Elements

- ✓ Use sidebars for case study snippets
- ✓ Leverage online content

reliability. The network will remain fully functional and provides dedicated RF spectrum for alarm messages, including outage messages, to ensure outage notification success. ¶

## ■ Managing Your Outages with Confidence ¶

In the absence of line power, FlexNet-enabled electric meters detect, log, and report outages to the Head End System. The type of outage—momentary or extended—is determined using a utility-configured time threshold. This time threshold must be exceeded before the meter will report a power outage as an extended outage; otherwise, the meter reports a momentary outage. ¶

After a permanent outage condition is met, the meter transmits outage alarms over a radio-frequency (RF) channel specifically dedicated for alarm messages. This unique RF channelization feature creates a clear pathway for critical alarm messages, eliminates collisions with other types of messages being transmitted at the same time, and ensures that outage notifications are delivered to the utility as promptly as possible. ¶

The FlexNet radio inside the electric meter sends four alarm messages to the base stations at random times to spread out the alarm messages for larger outages. Many FlexNet utilities have expressed their satisfaction with the system's ability to send critical outage information to their personnel most quickly. ¶

Click [here](#) to see how the FlexNet more accurately pinpoints outages to provide faster recovery than mesh networks. ¶

## ■ How long does it take for a power restoration message to come [in to](#) the headend software following an

In another instance, the city detected an electricity customer with high consumption and worked with the customer to identify a problem with their heat pump, rectifying the issue before it led to a considerably higher bill. ¶

Click [here](#) to learn more. ¶

### 3. The Spit and Polish

Look for flow issues and “brain stops” ...

[REDACTED]

[REDACTED]

[REDACTED]



# Fix Bad Breaks in Bulleted Lists

- ✓ Don't leave bullets alone on a page
- ✓ Create a two-column list if it works
- ✓ Watch for bad breaks in bullets themselves

- →
- →

## Default Reports in the Head-End System ¶

The Device Manager within the Head-End System software includes a Reports tab, which features several convenient out-of-the-box reports for quick access to useful information about the system. ¶


- → Troubled Meter (Figure 10) ¶
- → Lifecycle ¶
- → Backfill ¶
- → Encryption ¶

- → Outage ¶
- → Scheduled Disconnect/Reconnect ¶
- → Communication ¶ Section Break (Continuous) ¶

29 ¶

Metering based on:

- →



Device ID	FlexNet ID	Alarm Conditions	Alarm Status	Alarm Count	% of Total Alarms	Alarm Count (30 day)	Hrs Stale	Last Heard
		Excessive Alarms %		92	293	590	11/26/2021	
		Instant Mortality		92	293	590	11/26/2021	
		Stale Comms	PF	0	0	254	12/10/2021	
		Stale Comms	PF	0	0	179	12/13/2021	

# Fix Bad Breaks in Text Flow

- ✓ Don't begin a response on a new page
- ✓ Try to keep requirements and responses on the same page

ability for your operations team to switch load from one feeder to another one, since a more balanced feeder has more capacity to take on the switched load from an adjacent feeder.¶

- *Provide detail on ability of residential meters to monitor the voltage difference between each leg as well as the voltage difference between in-phase and the neutral wire.¶*

The Sensus Stratus IQ meter can measure the phase voltages for the form 12S meter.¶

61¶

For Form 2S installations, the Sensus Stratus IQ supports 'loss of neutral detection'. The Sensus Stratus IQ has been enhanced to use its advance measurement capabilities, where we measure the voltage and current thousands of times per second to determine if the neutral connection for the residential form 2S service has been cut or has deteriorated. This condition can affect the ability for the protection scheme in



# Fix Bad Breaks in Text Flow

- ✓ Don't break text mid-sentence ...
- ✓ ... especially when it creates widows
- ✓ Watch for bad breaks in sections

conceivable increase in electric metering, other endpoint types, and transmit rates that your system will need in the future. ¶

▪ **Base Stations** ¶

At the core of the FlexNet solution is the M400B2 base station (Figure 1), which anchors the flexible, point-to-multipoint architecture of AMI meter-reading systems and other high-value applications. Base stations

9 ¶


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are data collectors that serve as the field devices in the FlexNet system, installed throughout your service territory in accordance with the propagation study (please see the RF Propagation Study in Section F, "Supporting Materials.") ¶


Often, they can be installed in substations and on existing communication towers, water towers, poles, and buildings. ¶

Seasonal Usage Profile Published ☆

Spring Profile



Summer Profile





# Voila!

- ✓ Don't make your readers work harder than necessary
- ✓ Create a bid response that has a nice “handle”
- ✓ Do the little things that could make a difference
- ✓ Questions, comments ... ?
- ✓ Feedback, please!