

**Great Lakes Energy Connections, Inc. dba Truestream (“Truestream”)  
Open Internet Transparency Disclosures**

Consistent with the Federal Communications Commission’s Open Internet Rules found in Part 8 of Title 47 of the Code of Federal Regulations, Truestream provides this information about our fiber broadband high-speed Internet access services. All Internet service providers are required to publicly disclose information about their network management practices, performance characteristics, and terms of service. This information is provided so that our current customers, prospective customers, third-party content providers and other interested parties can make informed choices regarding their broadband Internet services.

We welcome questions or comments about this information. You may contact us at:

Truestream  
1323 Boyne Ave.  
Boyne City, MI 49712  
[info@truestreamfiber.com](mailto:info@truestreamfiber.com)

**Network Practices**

**General description**

Truestream provides a variety of fiber broadband high-speed Internet service offerings to our residential and business customers. We provide service over our broadband network and through third parties’ fiber optic lines connecting to the Internet. We also contract with one or more companies for certain network monitoring and management services. We monitor our network and traffic patterns and make changes we deem necessary to manage and improve overall network performance. We use reasonable, nondiscriminatory, network management practices to improve overall network performance to ensure a high-quality online experience for all users. Our network management practices do not throttle, target or block any lawful specific content, application, service or device. As network management issues arise and as technology develops, we may employ additional or new network management practices. We will update these disclosures as necessary.

**Related documents and disclosures**

Use of our fiber broadband high-speed Internet service is also governed by:

- Terms & Conditions / Customer Agreement, available at [www.truestreamfiber.com](http://www.truestreamfiber.com)
- High Speed Internet Service Overview, available at [www.truestreamfiber.com](http://www.truestreamfiber.com)
- Acceptable Use Policy, available at [www.truestreamfiber.com](http://www.truestreamfiber.com)
- Privacy Policy, available at [www.truestreamfiber.com](http://www.truestreamfiber.com)

**Congestion Management**

Truestream uses various tools and techniques to manage and monitor its network, deliver its service and ensure compliance with the Acceptable Use Policy. Without effective network management, customers would be subject to the negative effects of spam, viruses, security attacks, network congestion, and other risks or degradations of the service.

Truestream uses quality of service (QoS) to separate data types and may prioritize them at different levels. For example, voice calls may be prioritized over general Internet traffic.

Our congestion management practices potentially affect all network traffic, but do not target any specific content, application, service or device.

#### Prioritization

Truestream does not prioritize any traffic to benefit any party or affiliate, in exchange for consideration, monetary or otherwise.

#### Application-Specific Practices

Truestream uses industry standard tools and generally accepted best practices and policies to help meet its customer commitment. To protect the security of our network and its customers, we may identify and block known hostile ports.

#### Device Attachment Rules

Truestream places no general restrictions on lawful devices that a customer may connect to our network, so long as the device is: (i) compatible with our network; and (ii) does not harm our network or other users. Our fiber broadband Internet service works with most types of PCs and laptops, including Macs, and other Internet-compatible devices like game systems and Internet-enabled TV's. If a wireless router is connected to the service, wireless Internet compatible devices including computers, tablets, smartphones and other devices can connect to our network. If a customer or potential customer believes that they have an unusual configuration, contact us and we will help determine if there is a compatibility issue.

#### Fiber-To-The-Home (FTTH) equipment

Truestream installs Optical Network Terminals (ONTs) at the customer's premises to enable use of our broadband high-speed Internet service delivered via our FTTH network.

#### Network and End User Security

The following provides a general description of the practices we use to maintain the security of our network:

Hostile port blocking: Truestream may identify and block known hostile ports to prevent unwanted files, browser hacking and virus attacks.

Hostile IP blocking: Truestream may identify, and block known hostile IP addresses (s) to prevent DDoS attacks, infrastructure hacking attempts, and malicious attacks on customers.

Virus and spam filtering: Network management activities may include identifying spam, detecting malicious Internet traffic and preventing the distribution of viruses or other harmful code or content.

Other tools and techniques may be implemented in order to meet our goal of delivering the best possible broadband Internet experiences to all of our customers.

#### Data usage

Truestream has not established a monthly data usage cap for its customers. We do however monitor usage. We regularly review accounts with uncommonly high usage relative to all other accounts to ensure such accounts have not been subjected to cloning, unauthorized access, other security breaches, or unlawful activity. As part of our review, we may contact account holders to inquire about usage and may take or require actions to correct problems such as security, class of use or unlawful activity.

### **Performance Characteristics**

High-speed broadband Internet Service is provided via fiber connections. ONT's are installed at the customer premise and we utilize G-PON FTTH technologies to deliver service to the end user. Truestream provisions its ONTs and engineers its network to maximize customers' ability to receive the maximum speed levels for each tier of service. Truestream does not however guarantee that a customer will achieve those speeds at all times. Truestream advertises its speeds as "up to" a specific level based on the tier of service to which the customer subscribes. The actual speed a customer experiences may vary based on a number of factors and conditions.

- Performance of a customer's Internet connected device, including its age, memory, processing capability, operating system, and the number of applications simultaneously running, and the presence of any malware or viruses.
- Type of connection between a customer's computer and modem. For example, wireless connections may be slower than direct connections into a router or modem. Wireless connections also may be subject to greater fluctuations, interference and congestion.
- The distance packets travel (round trip time of packets) between a customer's computer and its final destination on the Internet, including the number and quality of the networks of various operators in the transmission path. The Internet is a "network of networks." A customer's connection may traverse the networks of multiple providers before reaching its destination, and the limitations of those networks will most likely affect the overall speed of that Internet connection.
- Congestion or high usage levels at the website or destination. If a large number of visitors are accessing a site or particular destination at the same time, your connection will be affected if the site or destination does not have sufficient capacity to serve all of the visitors efficiently.
- Gating of speeds or access by the website or destination. Due to limitations in the website's physical connection to the internet and/or in order to control traffic or performance, many websites limit the speeds at which a visitor can download from their site. Those limitations will carry through to a customer's connection.
- The performance of a subscriber owned router installed. Equipment performance may degrade over time, and certain devices are not capable of handling higher speeds.

Latency is another measurement of Internet performance. Latency is the time delay in transmitting or receiving packets on a network. Latency is primarily a function of the distance between two points of transmission, but also can be affected by the quality of the network or networks used in transmission. Latency is typically measured in milliseconds, and generally has no significant impact on typical everyday Internet usage. As latency varies based on any number of factors, most importantly the distance between a customer's computer and the ultimate Internet destination (as well as the number and variety of networks your packets cross), it is not possible to provide customers with a single figure that will define latency as part of a user experience.

Actual performance of our broadband high-speed Internet service in most cases will conform to the national wireline broadband Internet speed and latency levels reported by the FCC.

<https://www.fcc.gov/general/measuring-broadband-america>

The FCC has reported that fiber customers experience average latency delays of 13 milliseconds.

### **Commercial Terms**

Pricing information for our fiber broadband high-speed Internet services are available online at

[www.truestreamfiber.com](http://www.truestreamfiber.com).

### **Customer Information Privacy and Security**

Truestream maintains the privacy and security of all customer network traffic in accordance with the Truestream privacy policy available online at [www.truestreamfiber.com](http://www.truestreamfiber.com).

### **Additional Information**

Please contact Truestream at [info@truestreamfiber.com](mailto:info@truestreamfiber.com) to discuss any issues or concerns. If any information found within our policies and agreements are inconsistent with this network management disclosure, this disclosure controls.