



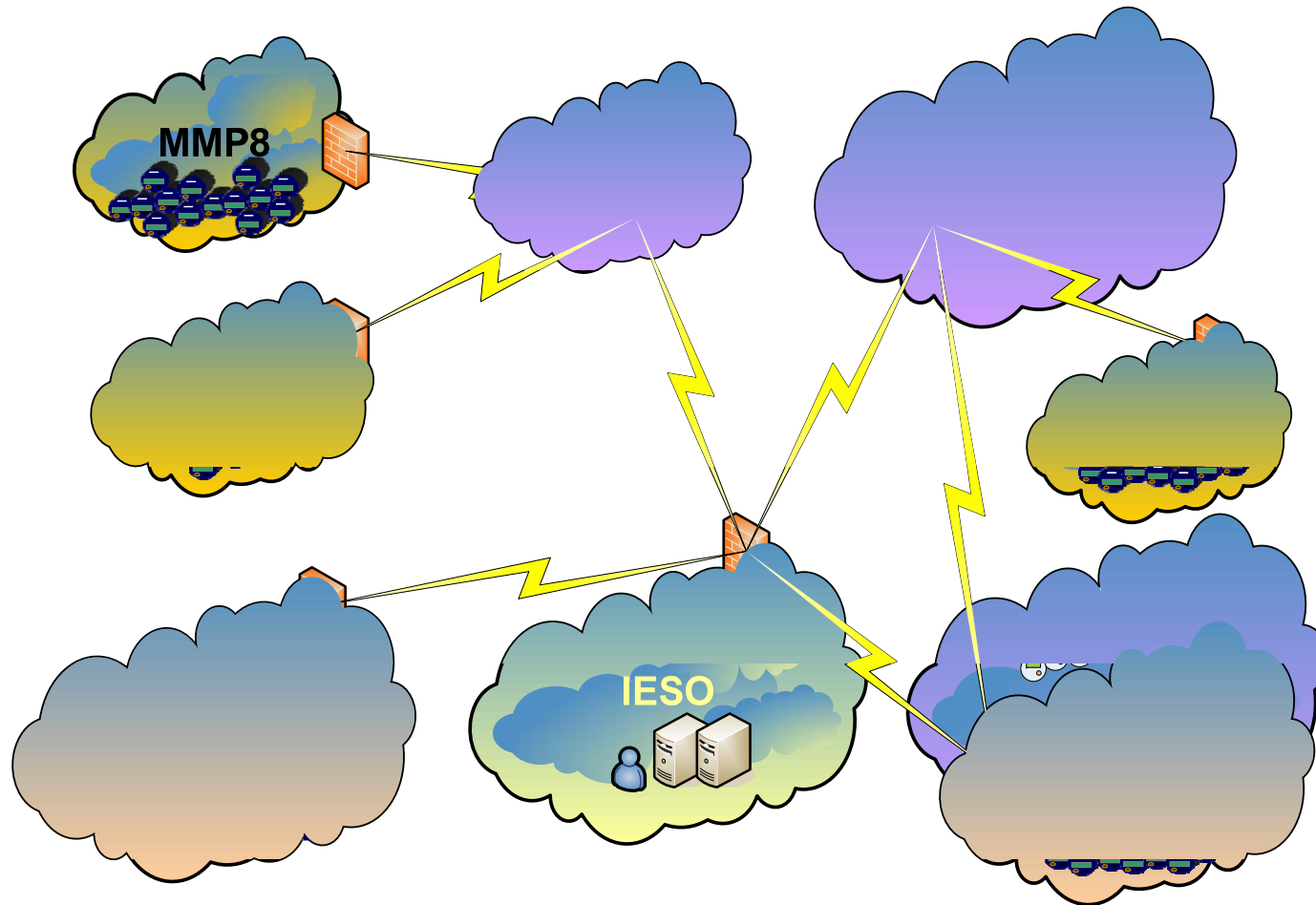
TCP/IP Update Conforming Meter List

Revenue Metering Standing Committee
October 28th, 2010



- IESO interrogates 3583 meters on a nightly bases.
- 324 meters are interrogated via MV90 TCP/IP.
- Average daily interrogation time is 2.8 minutes including the hybrid solution and 0.9 minutes for a true Ethernet solution.
- Average telephone interrogation time is 2.1 minutes.
- Growing trend towards TCP/IP as a common platform for Smart Meter and Smart Grid application.

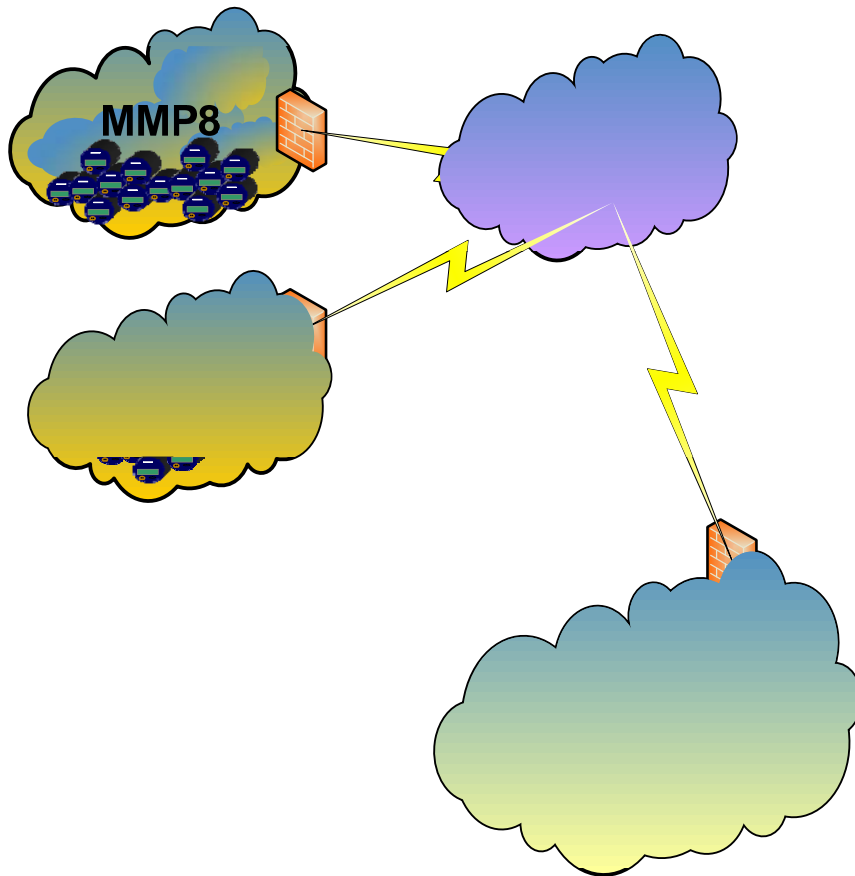
TCP/IP Communication Model



Large MMP
that is also an
MSP

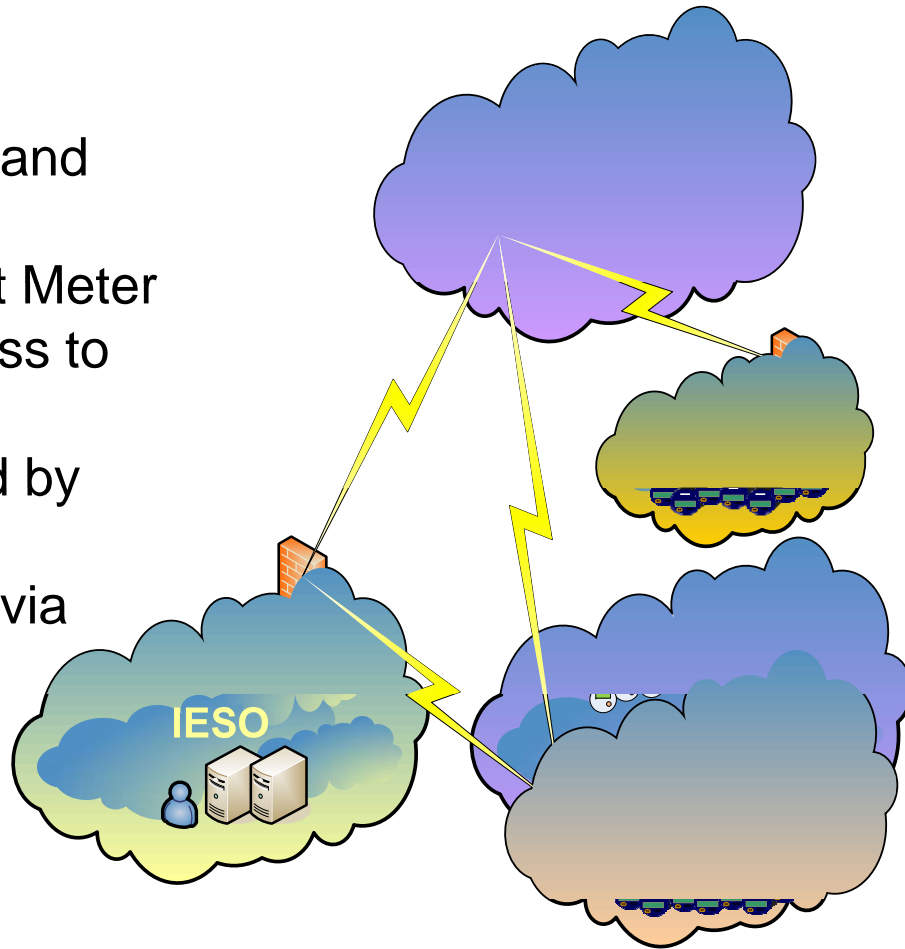
Large MMP

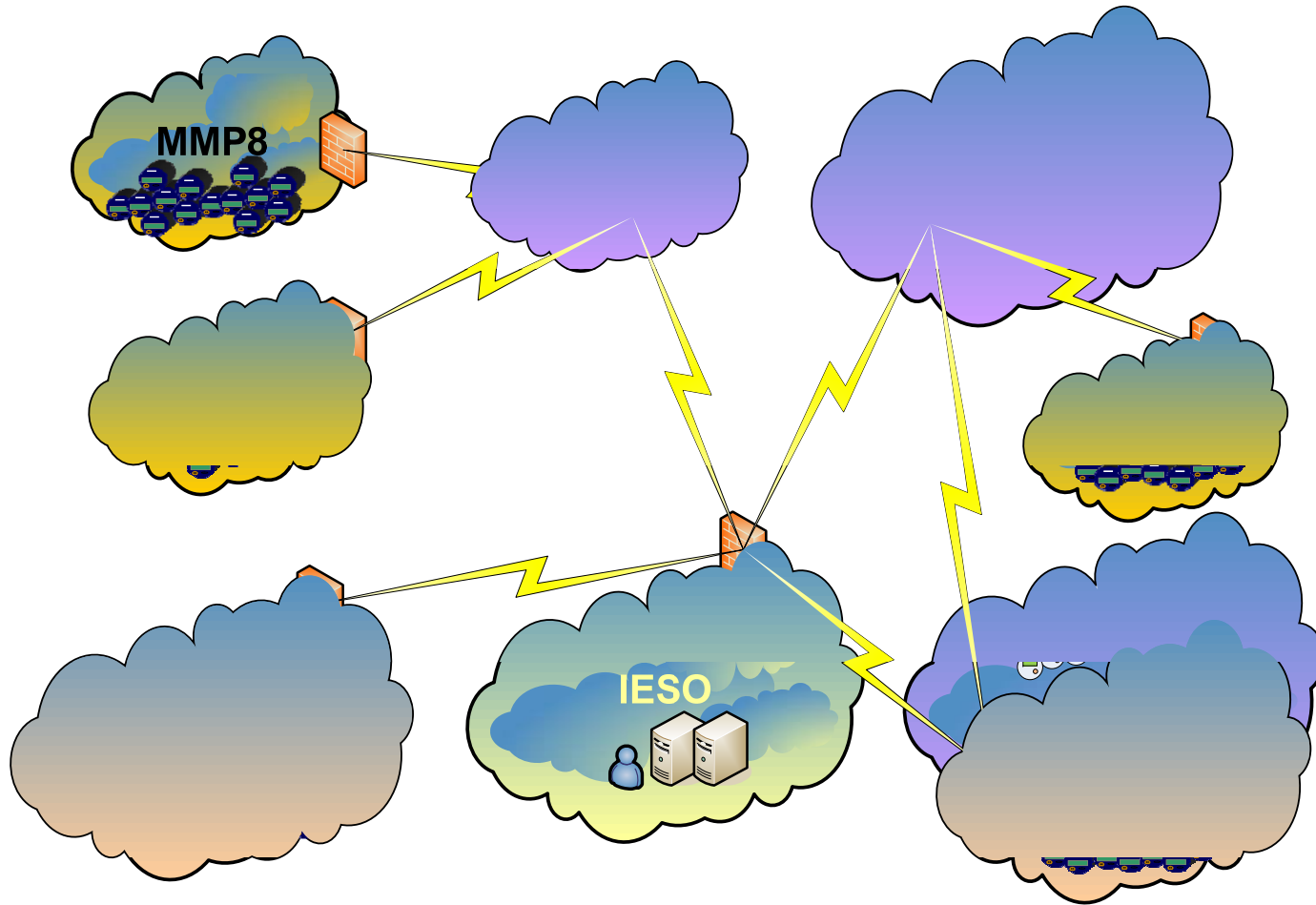




- IESO connection with MSP. MSP connected with MMP's.
- MSP manages IESO's access to MMP's meters.

- IESO is connected to MMP1 and MSP3.
- MMP1 leveraging their Smart Meter network. IESO only has access to revenue wholesale meters
- MSP3 has host network used by small MMP's.
- IESO is connected to MMP2 via MSP3.
- MSP3 manages IESO's access to meters.





- Previous models for connectivity demonstrated the IESO would connect to MMP via an Internet Service Provider (ISP).
 - This connection type will no longer be supported.
 - Requires 3 party agreement.
- Also need to consider disaster recovery/back-up centre.
- Failed connectivity lasting more than 2 days may have implication on MTR's and possibly settlement statements.

- The IESO currently has connectivity with 2 MMP's and 1 MSP.
- IESO has met with 5 MMP's and 2 MSP's to discuss connectivity.
- A lot of interest to move towards this type of connection.
- IESO considering updating communication standards to mandate TCP/IP for all new facilities (future).
 - Will require support from MSP's

- The Conforming Meter List (CML) has been updated.

Manufacturer	Make	Model
Elster Metering	ALPHA Plus	A1RLQ+ and A1RL+
	ALPHA	A3RL
GE Canada Inc.	GE	KV2 and KV2c
Schneider Electric	ION	8300/8400 8500/8600
Itron Canada	QUANTUM	Q1000
	SENTINEL	SENTINEL
Ametek/Scientific Columbus	AMETEK	JEMStar

- IESO is in the process of updating all meter frameworks to capture all CML meters.
- Updating Meter Installation Registration Tool (MIRT) to include all CML's.

