

Water & Wastewater Cost of Service



Rate Case Frequency

Water

- Infrastructure replacement / modernization
- \$335 billion to \$1 trillion capital program/
25 yrs. (American Society of Civil Engineers)
- Declining Use per customer
- Rate cases - often 2 yr. cycle
- Riders
 - Decoupling Surcharge
 - Infrastructure Surcharge
 - Advanced Metering Surcharge

Rate Case Frequency

Wastewater

- EPA consent decree
 - Huge capital program
 - Separate wastewater / storm water
- Infrastructure replacement / modernization
- Wastewater – declining customer use
- Storm water
 - Impervious Charge
 - Property Tax
- Riders
 - Decoupling
 - Infrastructure Surcharge
 - Advanced Metering

Rate Case Frequency

Wastewater

- Surcharges
 - Biological Oxygen Deficiency (BOD)
 - Total Suspended Solids (TSS)
 - BOD and TSS surcharges are charged for readings that measure how contaminated wastewater is with compounds that are not normally processed in domestic strength wastewater.
 - If readings indicate that wastewater has an unacceptable level of contamination, BOD and/or TSS surcharges will apply to a customer's bill.

Water / Wastewater Rate Case Structure / Process

- Revenue Requirement
- Class Cost of Service
- Rate Design

Revenue Requirement

Water / Wastewater

Investor Owned

- Operating Expenses
- Employee costs/benefits
- Other taxes
- Income taxes
- Depreciation expense
- Operating Income
 - Rate Base * ROR

Municipal

- Operating Expenses
- Employee costs/benefits
- Other taxes
- Debt service
- Capital: Rate Revenue Funding
- Issues:
 - DSC coverage
 - % Rate revenue funding

Class Cost of Service

Three Steps

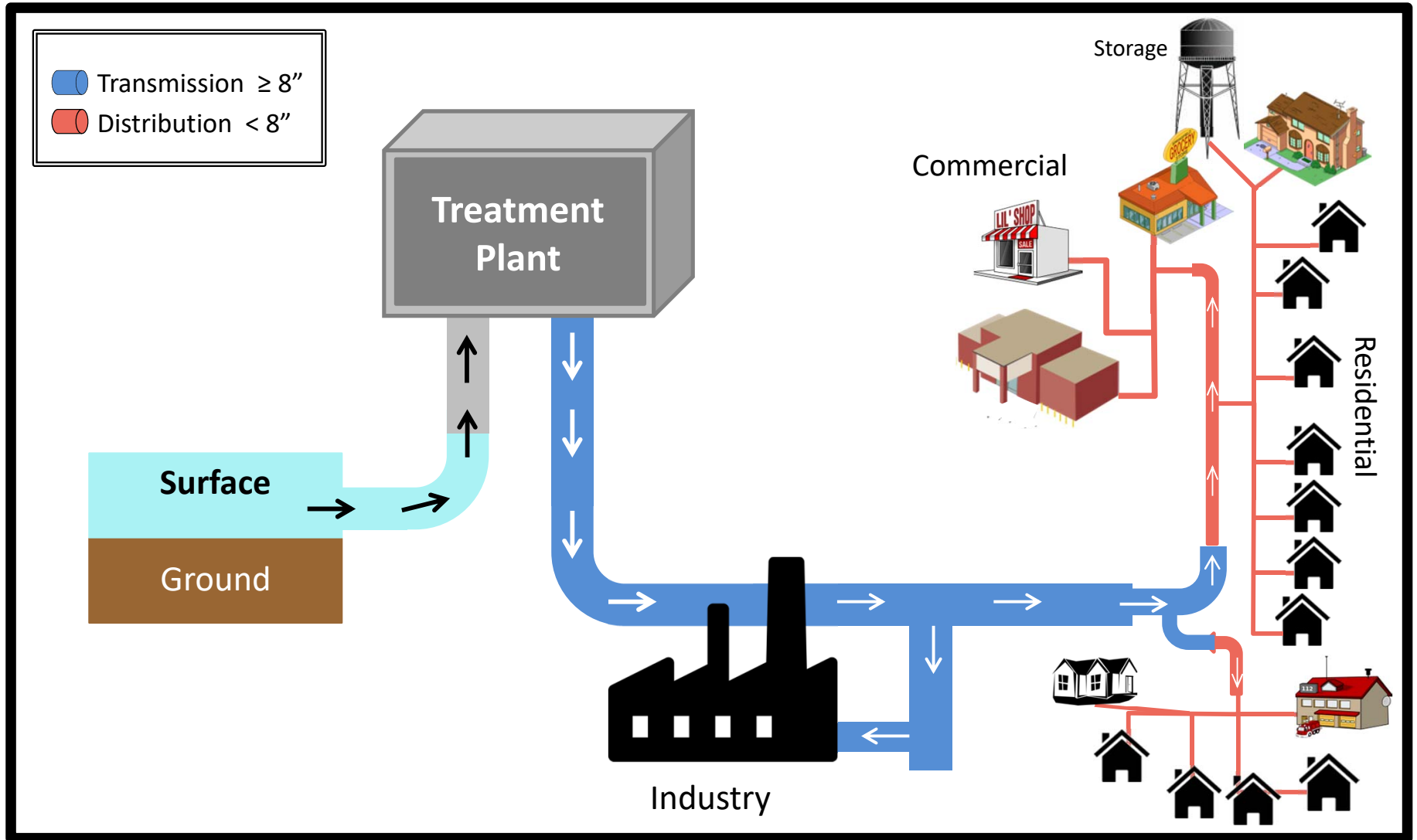
1. Functionalization
2. Classification
3. Allocation

Cost of Service

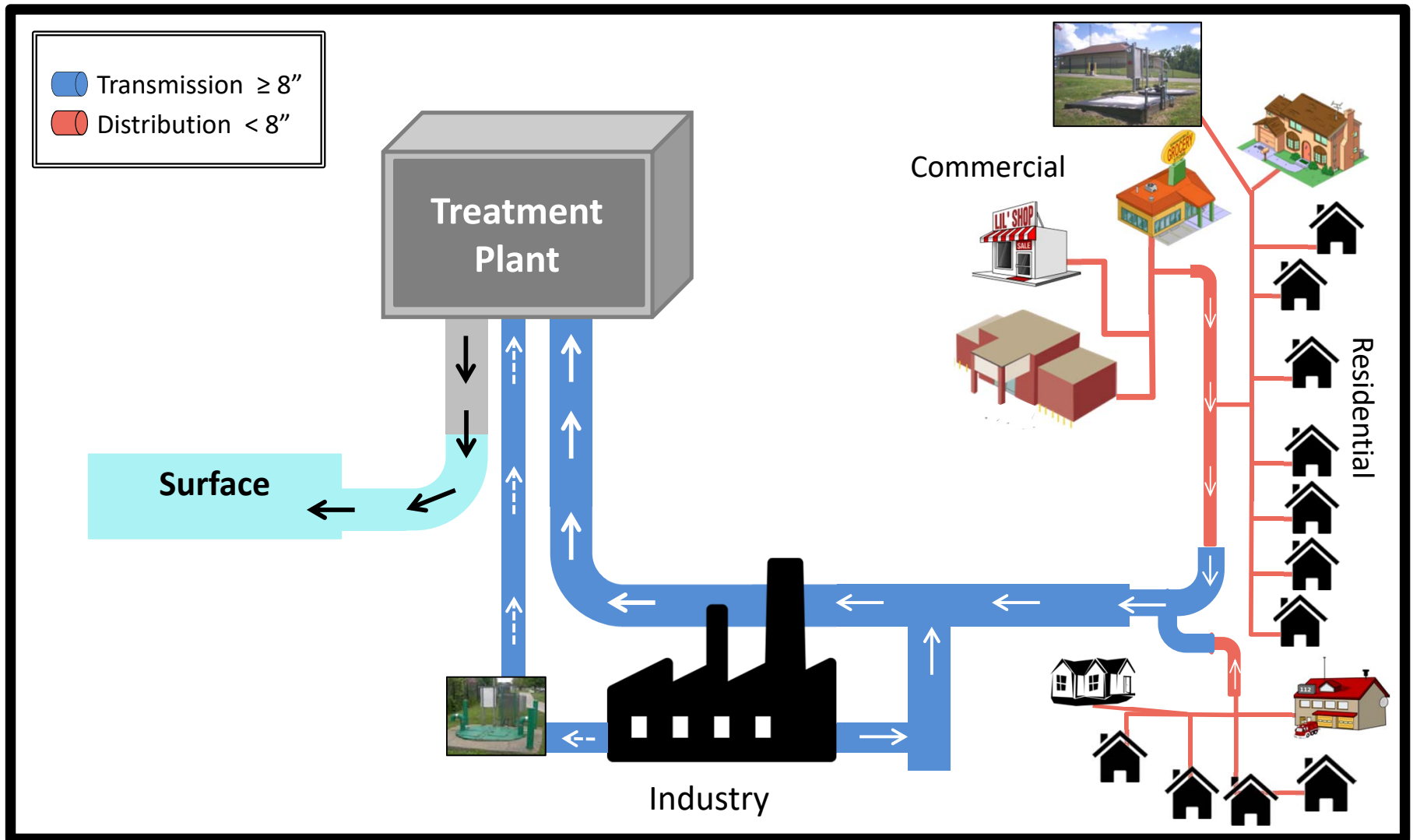
Cost Functionalization

- Supply – water / wastewater treatment
- Transmission
- Distribution & storage
- Services & meters
- Fire protection
- General

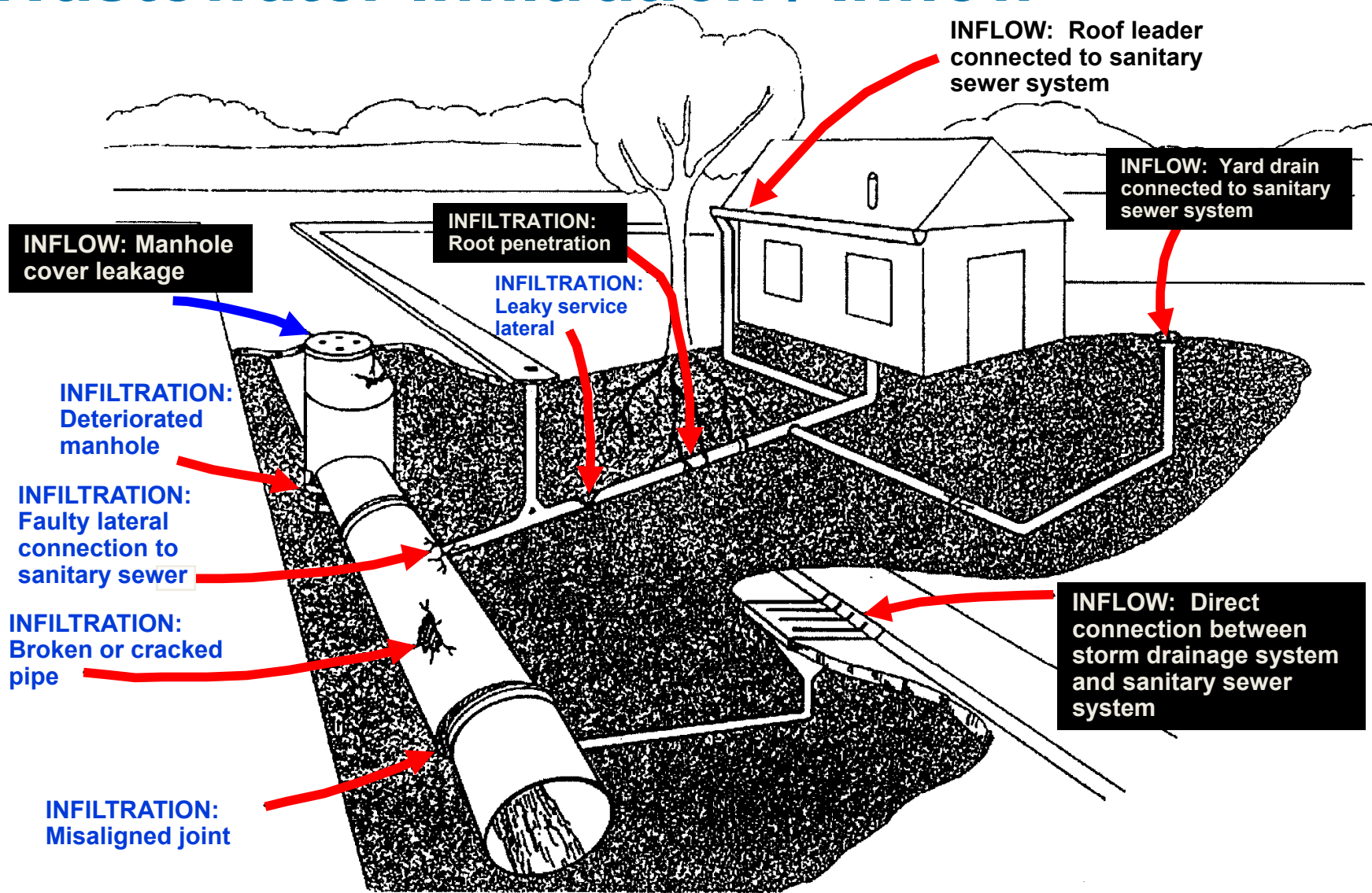
Water Transmission & Distribution Mains



Wastewater Transmission and Distribution Collection



Wastewater Infiltration / Inflow



Cost of Service

Cost Classification

1. Load Shape

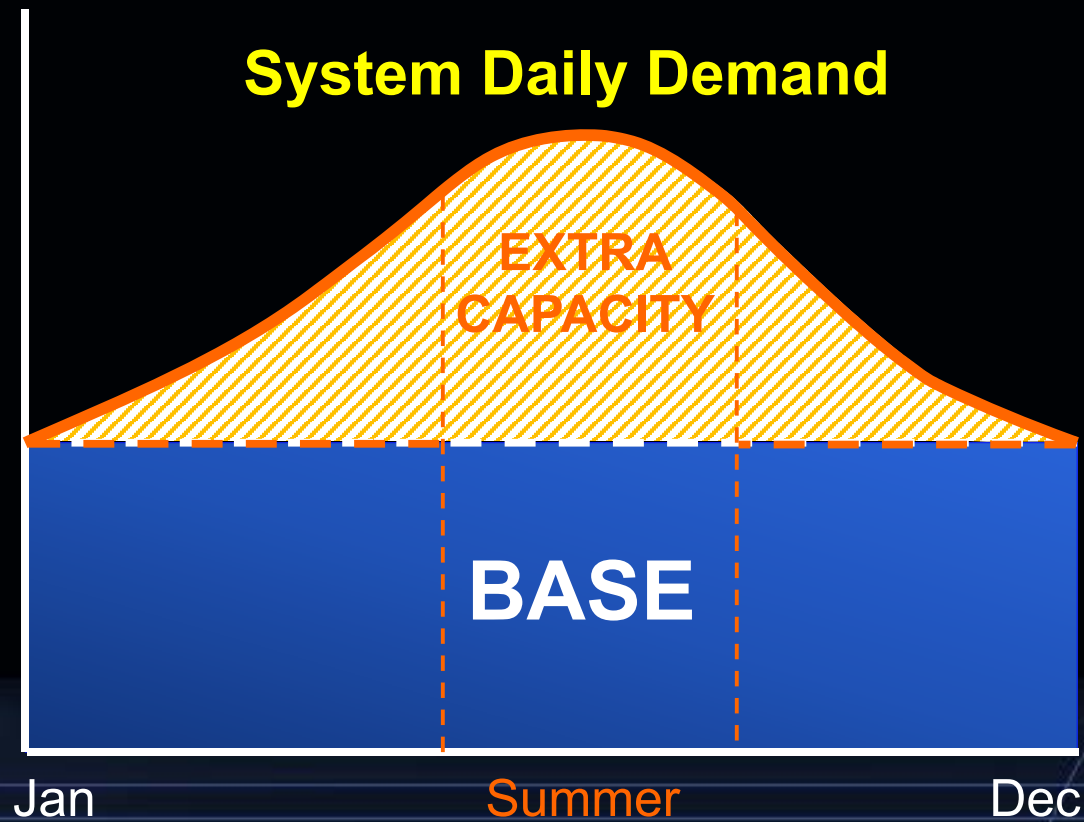
- Average Day
- Maximum Peak Day
- Maximum Hourly Peak

2. Customer

- Large Mains
- Small Mains
- Miscellaneous

3. Fire / Infiltration & Inflow

Load Shape



Functionalization / Classification

Classification

Function	Base	Max. Day	Max. Hour	Cust.	Fire	System
Production	50%	30%	10%	---	10%	100%
Transmission	50%	30%	10%	---	10%	100%
Distribution	30%	30%	10%	20%	10%	100%
Customer	----	----	----	100%	----	100%
Fire Protection	----	----	----	----	100%	100%

Customer Classes

Classification

Rate Class	Classification				
	Base	Max. Day	Max. Hour	Cust.	Fire
Residential	20%	25%	40%	----	20%
Multi-family	10%	15%	25%	----	10%
Commercial	35%	25%	20%	----	35%
Industrial	30%	25%	5%	----	5%
Public Authority	5%	10%	10%	----	30%
System	100%	100%	100%	----	100%

Fire Protection

- **Public**
 - Hydrants along right-of-way
- **Private**
 - Standpipes
 - Sprinklers
 - Hydrants

Water / Wastewater Rates

- **Customer**
- **Volume charge**
 - Declining Block
 - Increasing Block
 - Flat Rate
- **Fire Service**
 - Flat Rate
 - In Volume Charge

QUESTIONS?