

Electricity Procurement Options

MBTA Financial Control and
Management Board Meeting

August 14, 2015



MBTA's Electricity Profile



- ❑ Consume over 453 Million kWh of electricity annually
 - ❑ Equivalent to the consumption by 42,000 households

- ❑ Extensive Electricity Distribution Network
 - ❑ Over 100 Traction Power and Unit Substations
 - ❑ 570 miles of cable

- ❑ Operate a 50 MW power generating station

- ❑ Defined as a utility in our enabling legislation

- ❑ Current wholesale electricity contract expires on 12/31/15



Electricity Costs

FY 2015 Costs of Electricity

- Generation Charges (via BP Contract):
 - \$26.5 million
- Transmission Charges (paid to local utility)
 - \$11.7 million
- Other Fees and Service Charges
 - \$2.4 million

TOTAL ELECTRICITY COSTS/FY 15

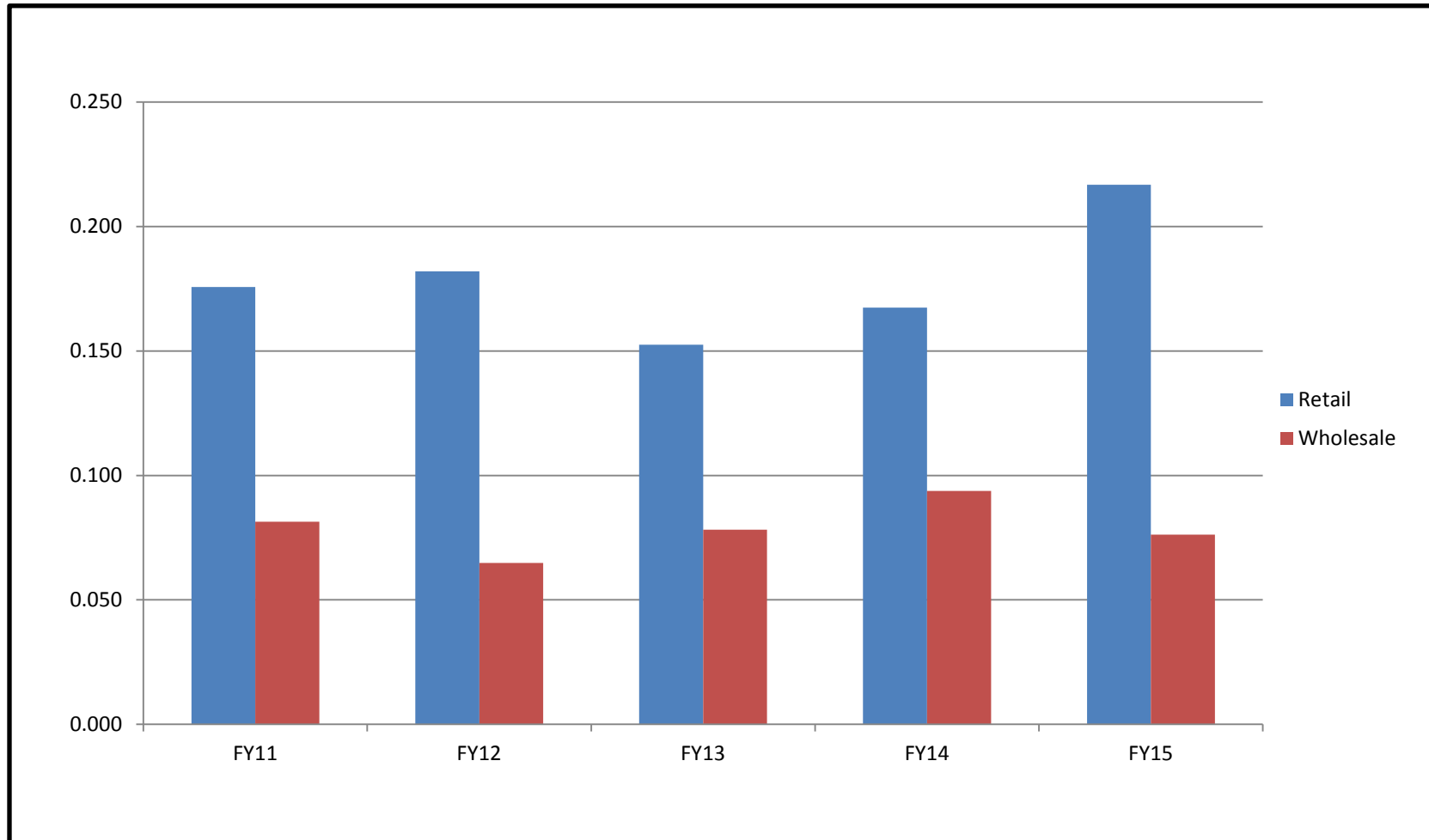
- \$40.6 million

MBTA Historical Electricity Costs

(in millions \$)



Retail vs. Wholesale Historical Electricity Pricing (\$/kWh)



Electricity Contract Specifications and Objectives



Objectives:

- Maximize the benefits of our status as a wholesale customer
- Balance the risk vs. the reward of participating in the market
- Focus on price predictability

Specifications:

- Seeking a wholesale supplier of electricity
- Transmission and distribution of electricity by local utility
- Contract variables: Volume, Price Structure and Term

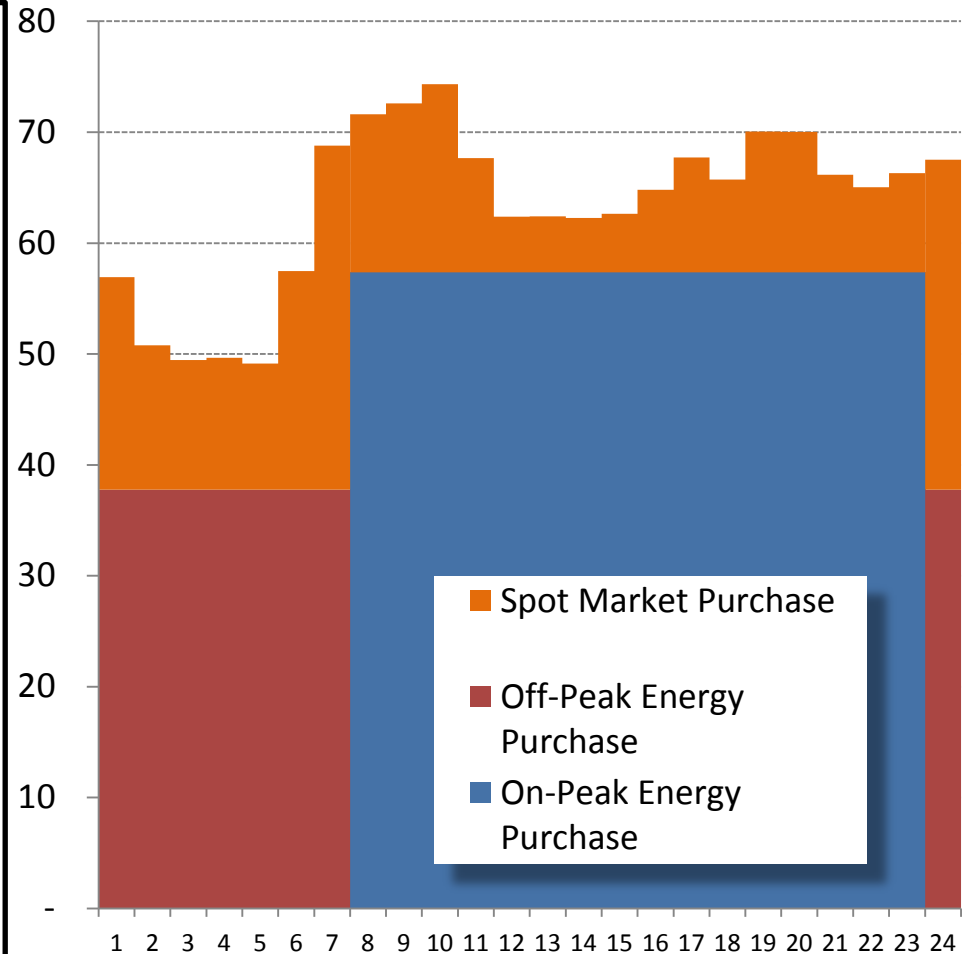


Procurement Option #1

Fixed Volumes

Typical Peak Day Load 90% Peak/70% Off Peak

- ✓ Blocks of energy sized to a portion of the MBTA's requirements.
 - ✓ Higher percentage during peak periods when prices are volatile
- ✓ Remainder of energy purchased from the ISO-NE Spot Market
- ✓ Lowest cost of energy because the MBTA retains the risk of spot market volatility
- ✓ This is the product the MBTA has purchased since 2003



Procurement Option #2

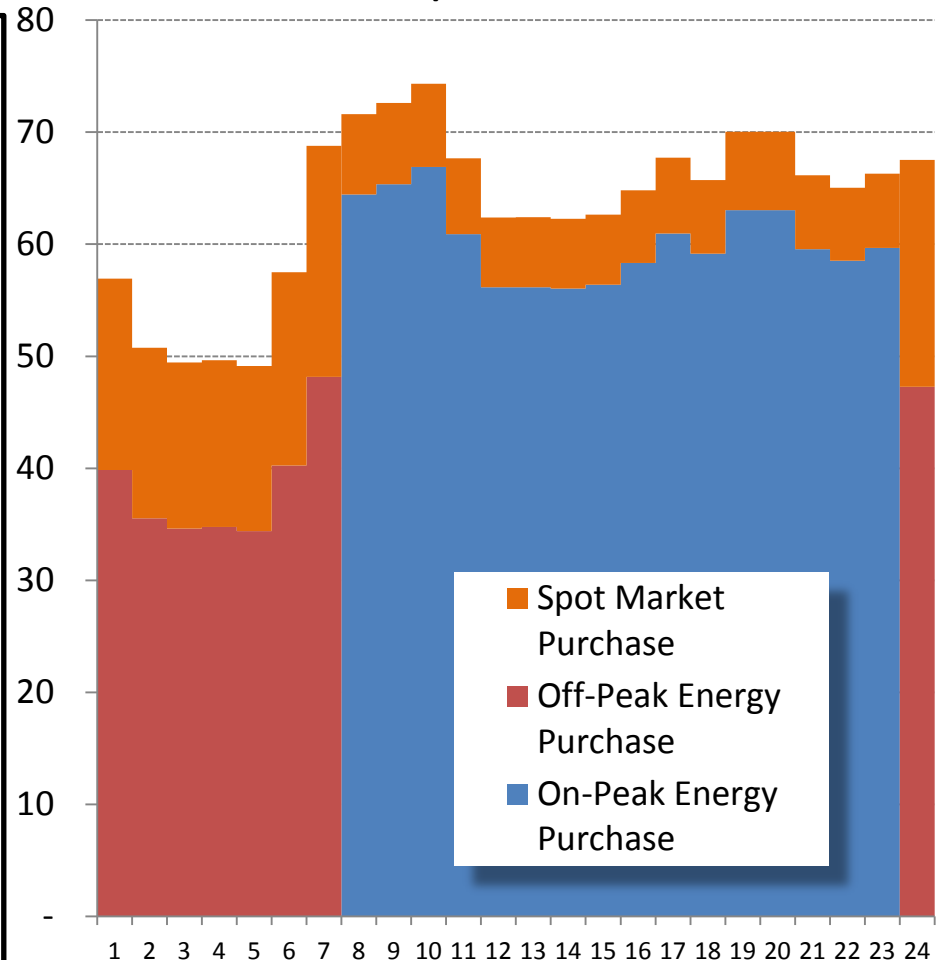
Load Following Energy

- ✓ Supplier Provides a percentage of the MBTA's load every hour
 - ✓ 100% would remove eliminated the spot market volatility
 - ✓ Percentage could track price and volatility risk in Fixed Volumes Options

- ✓ Higher cost of energy because the seller assumes risk of load and spot market volatility

Typical Peak Day Load

90% Peak/70% Off-Peak



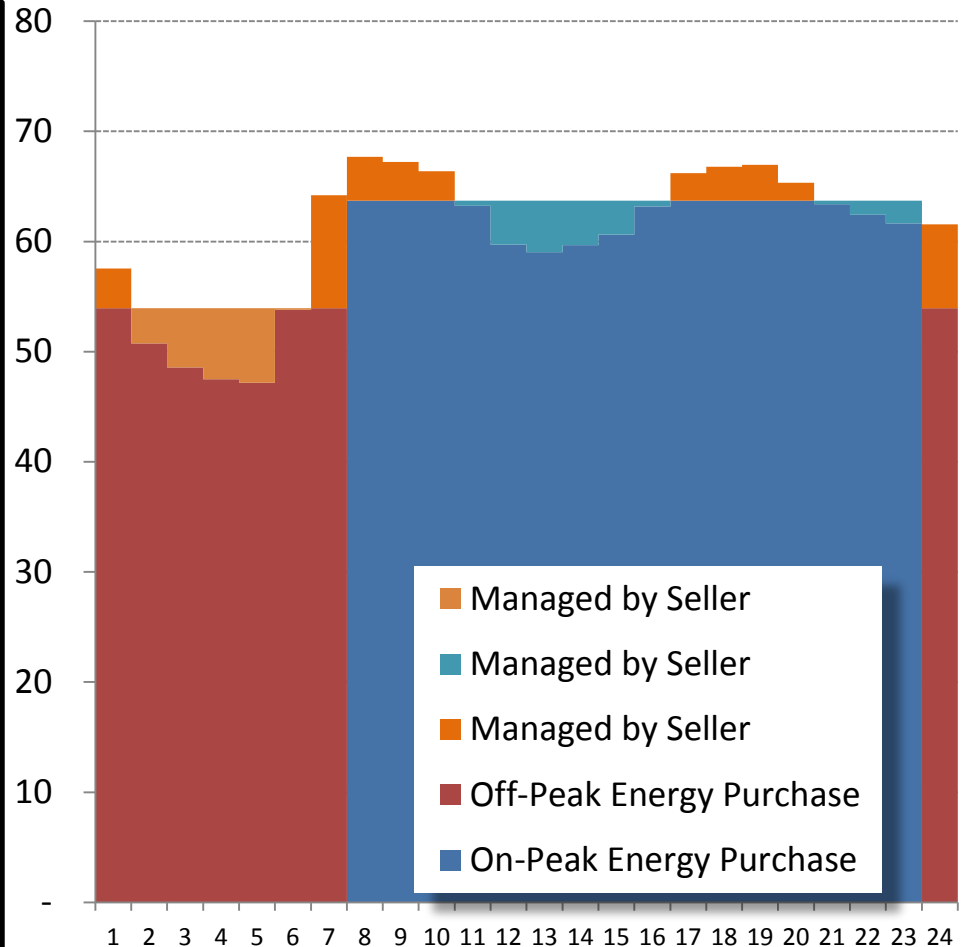
Procurement Option #3

Fixed to Load Following Conversion Product

- ✓ MBTA buys block of energy equal to up to 100% of its requirements
- ✓ Seller “converts” those blocks of energy into load following service
- ✓ MBTA pays seller for the risk of load and spot market price volatility
- ✓ MBTA implements Risk Management Strategy to purchase standard blocks of energy over time
- ✓ MBTA can purchase from multiple suppliers as a way to manage risk

Typical Weekday Load

100% On and Off-Peak Coverage



Contractual Considerations

Price Options for Electricity Procurement

- Fixed price contract
 - High degree of predictability for budgeting purposes
 - Risk if market prices fall
- Indexed price contract
 - Requires a Risk Strategy to mitigate possible increases in price

Contract Term:

- With a fixed price contract, desired term depends on current market price
 - When prices are low, a longer term locks in the value of the market price
- With an indexed price, other factors are to be considered:
 - Changes in market rules may make contract difficult or unattractive to administer
 - Greater risk of supplier default over a longer term

	Option #1 Fixed Volume Product	Option #2 Load Following Product	Option #3 Fixed to Load Product
Financial Risk to the MBTA (Critical Factor)	Medium	Medium	High
Projected Impact on Budget	Lowest Cost Option (Current Lowest Cost Operation Based on Past Performance)	Moderate Cost Option	Lowest Cost Option (Projection Based on Financial Models)
Need for Risk Management Strategy	Low	Low	High

Next Steps

- Get indicative prices for a five year term and a fixed price for the following products:
 - Fixed blocks of energy
 - Load following energy
 - Fixed to load following energy conversion

- Short list suppliers based on indicative responses

- Short list products based on management review of risk vs. price as well as other factors

- Issue RFP for a specific product with specific terms

Electricity Procurement Timeline



- Release RFI
 - Mid August 2015
- Receive and Evaluate RFI Responses and narrow options
 - Mid September 2015
- Present results of the RFI Response Evaluation to the MBTA FCMB Meeting
 - Early October Meeting
- Release Request for Proposals
 - Early to Mid October 2015
- Receive RFP Responses and Award Contract
 - Mid to Late October
- Contract in place for January 1, 2016

