Activity and Program based Benchmarking

Stakeholder Information Meeting

OEB Staff Presentation

March 5, 2019

Stakeholder Conference

Purpose

- Respond to stakeholders' questions regarding the Activity and Program based Benchmarking (APB) Staff Discussion Paper (EB-2018-0278).

Objective

- Provide an overview of the framework and review the elements of the APB Staff Discussion Paper.

Agenda

1000 - 1010	Welcome	Sagar Kancharla
1010 - 1040	Introduction to APB Framework	Sagar Kancharla
1040 - 1115	Identification & Preliminary List of Programs	Ben Bosch
1115 - 1130	B R E A K	
1130 - 1200	Benchmarking Methods	Mark Lowry
1200 - 1215	Wrap up / Next Steps	Sagar Kancharla
1215 - 1245	Q&A	

Introduction to APB

Evolving Performance Benchmarking

Renewed Regulatory Framework for Electricity utilities (RRF)

- Performance Measurement was a key component
- Total cost benchmarking for incentive rate-setting

Introduce Program/Activity level benchmarking

OEB's Plan for APB Benchmarking

- Implement APB for all rate-regulated entities
- The first phase to focus on distributors in the electricity sector
  - Development of a framework for APB and selection of activities/programs suitable for benchmarking
  - Implement benchmarking at the activities/program level in 2020
- Future phases to implement APB for electricity transmitters, gas distributors and Ontario Power Generation

Current Benchmarking – Total Cost Benchmarking (TCB)

Introduced as a result of the RRF as part of focus on utility performance measurement.

What it does..

- TCB determines the annual stretch factors used in IRM process
- High-level total costs composed of OM&A and capital costs
- Used in the determination of efficiency rankings

What it doesn't do..

- No identification of cost performance at the program or activity level
- No identification of specific areas where utilities can make improvements
- No identification of best performers/ practices

What is APB?

Activity and Program based Benchmarking (APB)

- APB is benchmarking at level of specific activities and/or programs

Staff's Working Definitions

- Activity: The granular level of utility activity or service identified by a financial account (OM&A or capital)
- Program: A set of related utility activities or services resulting in delivery of significant work or cost

Potential Uses in Regulatory Process

- Assessing and monitoring of utilities' performance
- Process efficiency through proportionate review of rate applications
- Informs performance incentives/penalties and policy development
- Complements total cost benchmarking

Benefits of APB

Consumers

- Increased transparency to understand their utilities' costs behavior
- Encourages cost responsibility while meeting the customer service
- Increased confidence in the regulatory process

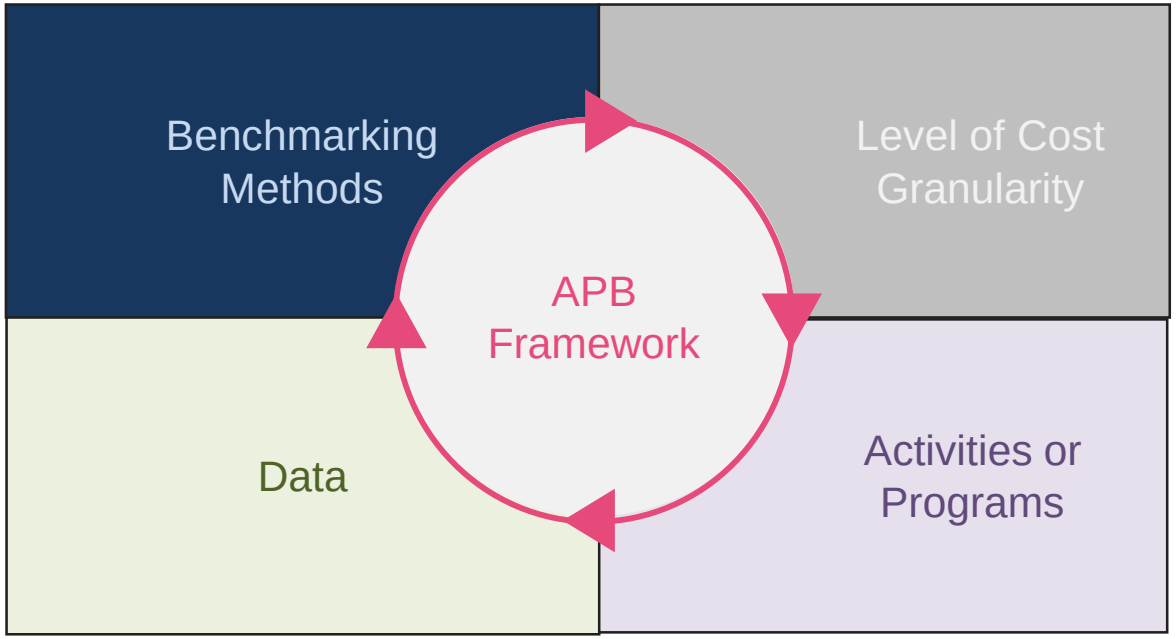
Utilities

- Identify areas of high performance / areas for improvement
- Provides opportunity to share / implement best practices
- Continuous improvement can improve productivity and profitability
- Potential to improve customer satisfaction

Regulator

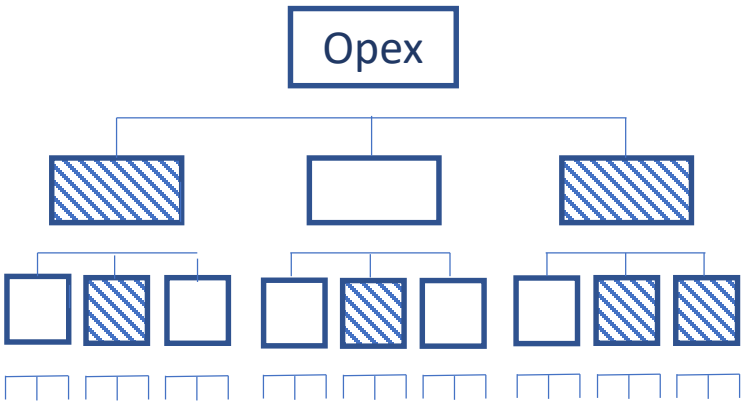
- Encourages continuous improvement within the sector
- Consistent reporting on key programs facilities performance comparison
- Support proportionate review of rate applications

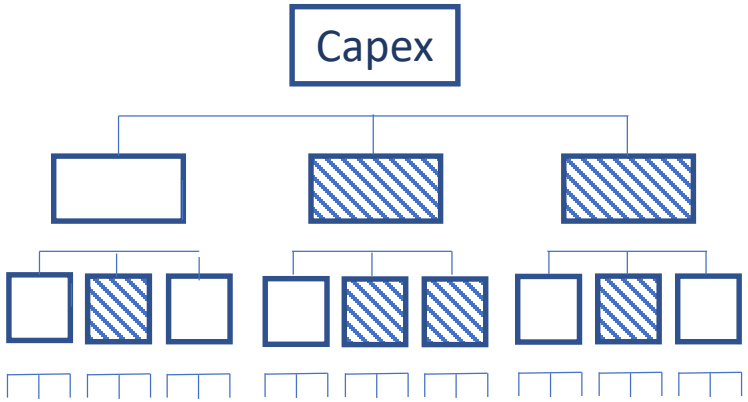
Elements of APB Framework



Selecting Activities/Programs

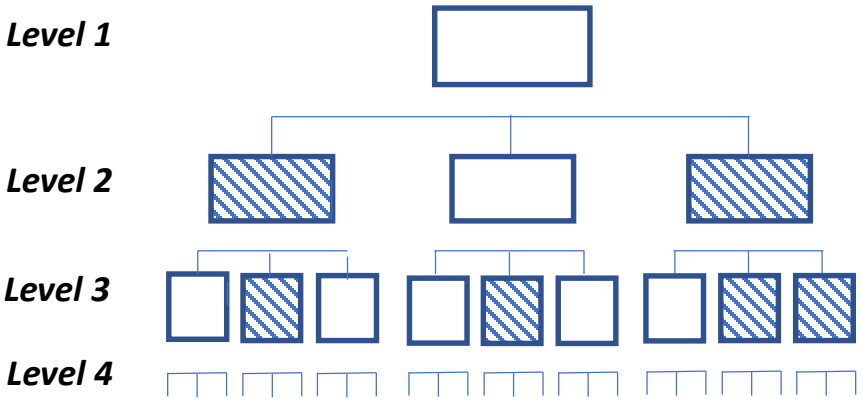
- The activities/programs should be selected based on certain criteria
- Key programs contributing to customer service and operations
- Consistent definitions and reporting





Level of Granularity and Data Considerations

- Optimal level of granularity
- Data quality - pre-requisite for good benchmarking results
- Current reporting and record keeping practices
- Numerous companies means large data samples
- Secondary benefit of APB – Improved transparency and reporting

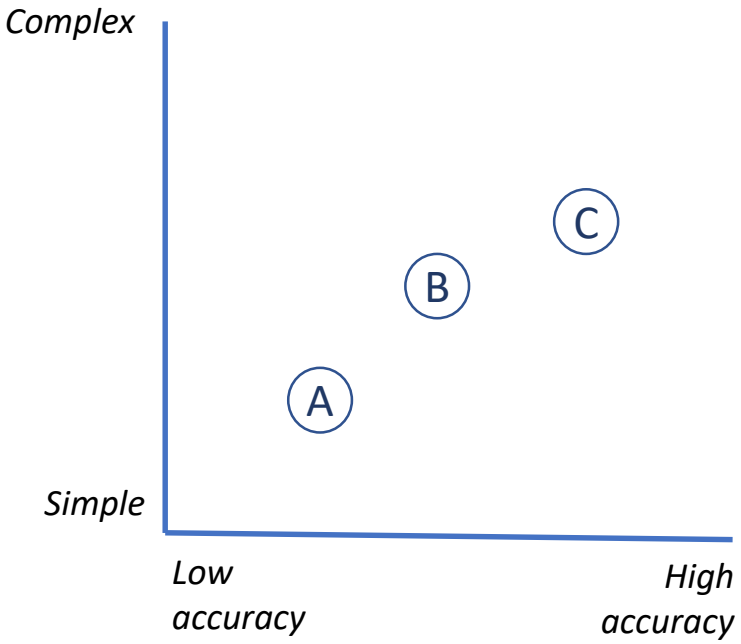


Methods of Benchmarking

Common methods:

- Unit cost analysis
- Cost/ Volume analysis
- Econometric modeling

Selection of the method that best fits the requirements, complexity and data content is important



Programs/Activities Identification and Preliminary List

Activity/Programs Selection Objectives

The selection of the activity/program should be:

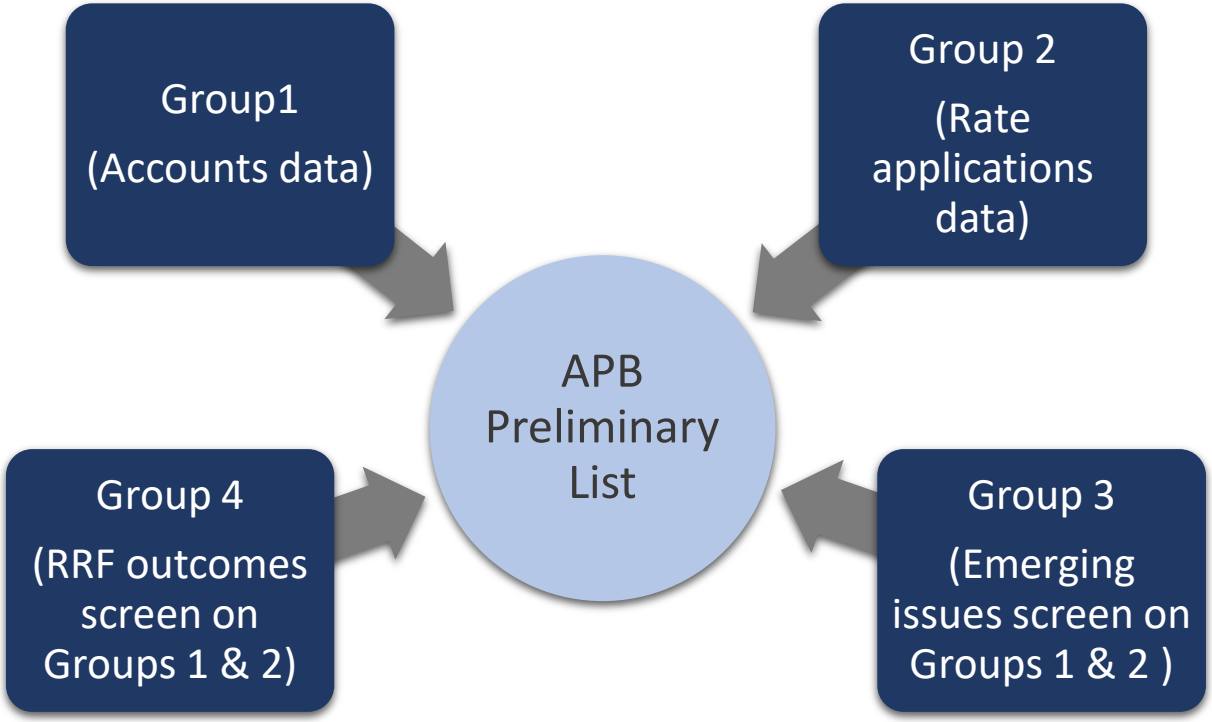
- A driver for more efficiencies and better outcomes
- Significant in meeting objectives of delivery of safe and reliable service
- Material to operating expense(s) and/or capital investment(s)
- Reasonable for data collection and reporting by distributors
- Uniform to enable accurate and comparable results among distributors and best practice identification

Activities/Programs Identification Process

Overview of Staff analysis and approach

- Identified and reviewed two data sources (RRRs and applications) to develop potential activities/programs candidate lists
- Applied two sets of influential factors (emerging issues and RRF) on potential candidate lists to prioritize their importance
- Developed four lists of potential activities/programs candidates applying quantitative and qualitative criteria
- Applied criteria to reduce the four lists into a single preliminary list of activities/programs

Overview of Activities/Programs Identification



Overview of four approaches (shown as four groups) used to identify Activities/Programs

Group 1 – Analysis of Accounting Data

- First data source: Uniform System of Accounts trial balance has many important uses including the production of the yearbooks, benchmarking studies (total costs) and use in rate applications
  - Accounts were specifically created to reflect the distribution business and provide insights into level of spending on OM&A and capital
  - Provides a good baseline of account level details on spending by individual distributors and the sector
  - To identify potential activities/programs, account balances were analyzed using aggregate electricity distributor sector figures for OM&A expenses and capital assets over a six-year horizon (2012-2017)

Group 2 – Analysis of Rate Applications Data

- Second data source: rebasing rate applications contain detailed information on proposed activities and programs spending
  - Reviewed 30 rebasing applications, cost of service and custom IRs, over five-year horizon (2014 to 2018 test years)
  - Analysis allowed for identification of activities/programs that may be material and common across the sector
  - Capital expenditures review based on four categories in filing requirements for DSP:
    - System Access
    - System Renewal
    - System Service
    - General Plant

Group 3 – Analysis of Emerging Issues Impacts

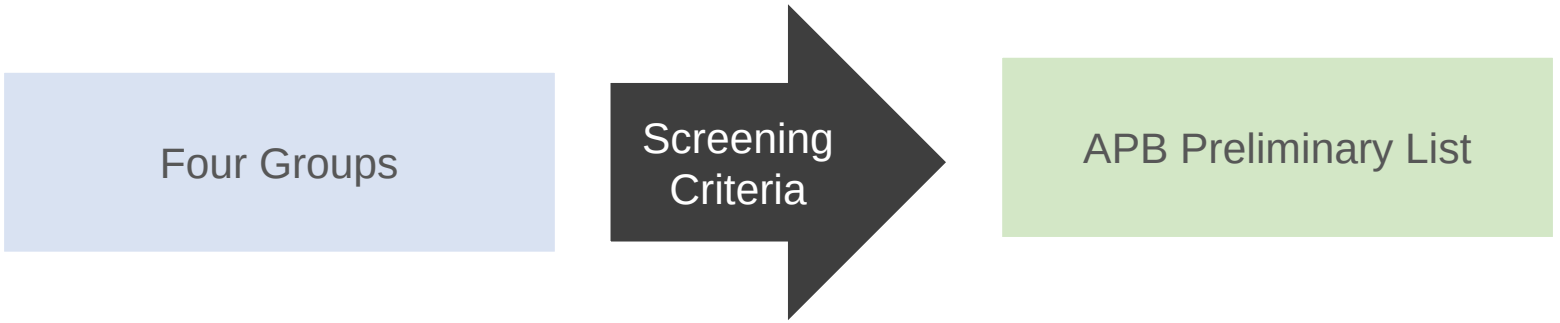
- First screen: applied emerging issues on potential activities/ programs identified in Groups 1 and 2 to determine their significance, if any
- The industry risks and trends identified include:
  - Increasing cyber security risk
  - Aging infrastructure
  - Changing supply and demand patterns
  - More extreme weather (e.g., climate change)
  - Increase in embedded generation facilities (increasing system complexity)
  - Growth – population and infrastructure (increased electrification of vehicles)
  - IESO market renewal
  - Technological innovation
  - Changing distribution network use by customers (distributed energy resources)
- As an example, increasing cyber security risk linked as relevant to hardware and software costs (IT system) identified in Group 1

Group 4 – Analysis of RRF Outcomes Impacts

- Second screen: applied RRF based outcomes to assess their order of significance on potential activities/programs identified in Groups 1 and 2
- Analyzed activities/programs linkages to the four performance outcomes identified in the RRF (customer focus, operational effectiveness, public policy responsiveness and financial performance)
- Specific linkages to impacts on service to customers were considered in assessing the activities/programs including impacts on consumer focus
- For example, billing accuracy linked as relevant to “Computer Hardware and Software” and operational effectiveness and system reliability to “Line Operation and maintenance” and others

Criteria for preliminary activities/programs selection

- Selection of an activity or program for preliminary list based on frequency of item appearing in the four groups
- An activity or program selected if it appeared in at least three of the four groups, provided it was also included both Groups 1 and 2
- Priority given to Groups 1 and 2 because their data is cost, or expense based, and already collected by distributors, whereas groups 3 and 4 are screens for influential factor



Preliminary List

No.	OM&A	Capital
1	Vegetation management	Line renewal/conversion (U/G and O/H)
2	Billing	Poles, Towers and Fixtures
3	Meter Expense	Transformers (including line transformers)
4	Line operation and maintenance	Distribution station equipment
5	Operation Supervision and Engineering	Meters
6	Distribution Station Equipment	Computer hardware / software
7	Bad Debt	New services
8	Collection	System Supervisory Equipment - SCADA
9	Maintenance Poles, Towers and Fixtures	
10	System Control/Control Centre Operations	
11	General Expenses & Administration	

Midgard Report

- Quantification of industry spending in four DPS investment categories
  - System Access, System Renewal, System Service, General Plant
- Identification of drivers common to many LDC's and any unique drivers which could be considered "forward looking"
- Identification of major assets commonly invested in across the sector
- Identification of trends in data aggregation and management practices
- Recommendation of programs and/or activities where benchmarking is appropriate and value added

Midgard's Recommended Asset Categories

Asset Categories	Asset Sub-Categories
Poles	Wood
	Concrete
	Steel
	Composite
Conductors	Overhead
	Underground
	Submarine
Transformers	Pole Top
	Pad Mounted
	Vault
	Transmission to Distribution Transformers (69 kV - 230kV / 13.8 kV - 44 kV)
	Sub-Distribution Power Transformers (13.8 kV - 69 kV / < 12 kV)
Switchgear	Circuit Breakers/Reclosers
	Switches
Meters	N/A
Voltage Regulators	N/A
General Plant	N/A

Short List

- Reducing activities/programs to 10 from 19 may allow more focused implementation and lessons learned can be applied to future refinements
- Six OM&A and four capital activities/programs are significant; represent 40% of total OM&A expenses and 47% of total gross capital balances (six-year averages)

OM&A	Group 1 Average Costs - OM&A ($ M)	Capital	Group 1 Average Costs – Gross Capital ($ M)
Vegetation management (Right of Way)	161	Poles, Towers and Fixtures	4,713
Billing	124	Transformers (excludes station transformers)	3,898
Meter Expense	81	Distribution station equipment	1,919
Line operation and maintenance	190	Meters	1,326
Distribution Station Equipment	50		
Maintenance Poles, Towers and Fixtures	29		

Data Considerations

- Reliance on RRR data means current reporting can be used to implement APB minimizing additional reporting
- Accounting data provides baseline data and ensures costs accuracy adding confidence in the APB results
- Generally sufficient data reported to support robust benchmarking of OM&A activities/programs
- Working Group data survey results indicated:
  - Potential new data for OM&A to develop scale variables can be facilitated
  - Capital expenditures data filed in rate applications can be provided

Data Considerations Summary

Summary of potential additional data for APB that distributors file or may maintain:

- √ Capital expenditures (historic and forecast) by four categories in the DSP (also a scorecard measure)
- √ Fixed asset continuity schedules (e.g., asset accounts for costs and accumulated depreciation by opening balance, additions, disposals, closing balance, net book value)
- √ Scale variables (e.g. MVA of substation capacity and Km of conductors)
- Capital asset details: plant age, remaining useful life and asset condition (have some but not all details)
- Data for cost-volume analysis of assets sub-categories for poles, conductors, transformers, etc. (may not have breakdowns by costs and volumes)

Break

Wrap-Up/Next Steps

Stakeholder Discussion Questions

- Comments on the Discussion Paper will assist the OEB in the development of APB framework.
- The questions in the Discussion Paper are just 'guiding' questions.
- The framework and the plans will evolve based on the comments.
- Comments by March 27, 2019.

Question Number	Question
Q.1	What other elements, if any, should the OEB consider in its development of an APB framework?
Q.2	What level of cost disaggregation is suitable for activities/programs benchmarking?
Q.3	Does the preliminary list provide a set of activities / programs for benchmarking that are meaningful in terms of utility operations and customer service?
Q.4	Should the OEB purse a phased approach for benchmarking activities and programs? Why?
Q.5	What benchmarking method(s) should the OEB use to benchmark activities/ programs? Why?
Q.6	What is the preferred method that will be well understood by customers and other stakeholders?
Q.7	What benchmarking method(s) provides the best indication of performance efficiency to allow distributors to understand the results, and provides the opportunity to undertake the appropriate action to improve their performance? Why?
Q.8	What data considerations should the OEB take into account?
Q.9	Should the OEB undertake to start collecting new data now to support future benchmarking under the APB framework (e.g. data associated tree trimming and asset sub-categories such as by type of poles or transformers)?
Q.10	What are the potential gaps in data gathering and what are the suggested mitigation solutions?
Q.11	What transitional issues need to be addressed?

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Q & A

Ontario