

# Meeting Notes #8

## Cost Allocation Working Group

Thursday, May 8, 2003

9:00 a.m. - 3:15 p.m.

### 1. Province-wide Load Data Collection

#### *Guest Presentation*

Professor Dean Mountain, presently teaching at McMaster University and formerly head of Ontario Hydro's load data collection program, attended as a guest of the working group to discuss, in further detail, joint collection of load data.

Professor Mountain reviewed past Province-wide load data collection initiatives conducted by the former Ontario Hydro to assess their relevance as guides for a new joint load data collection program:

- Typically load data would be collected from both the urban and rural systems. This remains a desirable goal for the present study.
- In the past, the Province was divided into 6 areas, and load data was collected from each geographic area. Wide geographic representation remains a desirable goal. Professor Mountain added that in the upcoming load data research program, it would also be advisable to include utilities serving residential customers of differing lifestyles.
- Around 500 meters were used to sample the residential class in past studies (such as in TOU rates research). However, Professor Mountain advised increased accuracy be sought in the load data to be used for the upcoming cost allocation studies, and therefore use of up to 700 meters would be preferable now. That number would be reduced by any residential interval meters which are currently installed in suitable locales. (Utilities on the working group started discussing how many installed interval meters they had available between themselves; further inquiries were to be made.)

Extracts from past Ontario Hydro technical reports (e.g. Report R&U 79-5) were examined which indicated that in several jurisdictions in the 1970's and 1980's (Ontario, Quebec, Wisconsin), the load of a rate class was estimated as a residual. Professor Mountain was asked if such a technique were applied now to estimate the load profile of the GS<50 kW grouping, would that "residual" class picking up an unfair share of any estimation error? He thought it would not. A detailed written explanation for his conclusion was later forwarded to the working group.

[Editor's note: Professor Mountain was scheduled to speak on the importance of weather normalizing load data, even for small LDCs; but time ran out, and his views were circulated in writing later.]

Professor Mountain concluded by noting there were a variety of other purposes updated load data could be used for, and local stakeholders might wish to consider establishing an Ontario research centre in the area of load data research

## **2. Weather Normalization**

The working group continued its discussion of weather normalization. Paula Zarnett presented a written discussion on the weather scenario that should be used to allocate demand-related costs (weather normalization for revenue forecasting was identified as a separate issue).

The presenter argued:

“If the demands of weather sensitive loads on the system under conditions of extreme hot or cold weather influence the view of the planning engineers as to the availability of that capacity to be used for new loads, it is the contention of this paper that the costs related to that capacity should be allocated to the weather-sensitive loads, whether or not the capacity was actually used (whether or not the triggering weather considerations occurred) during the year of the load research.”

The group discussion debated what is the design philosophy followed by electricity distribution systems. Many felt systems were built to handle extreme conditions, but other felt reliability was also a goal and this should not be ignored when allocating costs. [Editors' note: Professor Mountain later circulated his written views in support of the latter position.]

It was agreed that rate classes could be impacted differently depending upon how weather normalization was undertaken in the cost allocation studies.

## **3. Meter Data Management**

### *Guest Presentation*

Mr Douglass Bray, Manager of Metering and Data Management Services with an Ontario utility service company, made a guest presentation on meter data management. He focused on uses of MV-90 software, which is used widely in Ontario and many other jurisdictions, for Edits and Estimating according to internal and external VEE standards.

Mr Bray explained MV-90 can be used for totalizing and aggregating of loads. Contributors and the impact of their loads on the total can also be identified.

#### **4. Cost Allocation Case Studies**

##### *Urban*

Paula Zarnett presented a case study of a cost allocation study for a medium-sized urban utility.

In this example, data requirements from accounting records consisted of

- Trial balance, all accounts for test year
- Breakdown of all categories or revenue
- Gross asset balance and accumulated depreciation balance by asset function, beginning and end of test year
- Detail of any assets that could be directly assigned to a customer class
- Test year and prior year balance sheets
- Breakdown of employee salaries and wages by function
- Vehicle expenses by vehicle, and identification of vehicles by function
- Bad debt expense by class
- Miscellaneous revenue by class
- Water heater rental program costs
- Costs and revenues for services billed out to customers (at cost or at a cost-based rate).

In this example, data requirements from non-account sources consisted of

- Management judgement and off-line sources
  - Office floor space by function
  - Computer system utilization by function
  - Distribution loss information (engineering, if available)
  - Wholesale power bill and rates
  - Retail rates, all classes
  - Staff time log (if not recorded through accounting system)
- From billing records
  - Billing and revenue statistics for all metered electricity classes
  - Billing and revenue statistics for unmetered loads, including street lighting
  - Number of customers by class, by month
- Inventory System or Project Management
  - Costs of assets that can be directly assigned (historic or current)
  - Meter costs (historic or current)
- Regulatory Information for Revenue Requirement Computation.

## *Rural*

Mike Roger presented an overview of potential cost of service methodologies being explored by a rural distributor (Hydro One Networks). He discussed specific approaches to the functionalization, categorization and allocation steps. (Rate Design issues, such as Mitigation plans, were not discussed.)

Use of a (regular) minimum system method (rather than “modified” minimum system) was suggested in the presentation. It was reported that an Ontario minimum system study from the mid-1980's produced the following results:

- Rural Lines: 61% fixed, 39% variable
- Stations: 100% variable
- Transformers: 62% fixed, 38% variable.

It was suggested there may not need to be an updating of minimum system results, as the speaker understood the fixed percentage results evident in Ontario were consistent with industry averages in other jurisdictions.

## **5. Other Regulated Charges**

The working group decided to produce a comprehensive list of other regulated charges applied by LDCs, so that the present working group could eventually clarify precisely what items were considered to fall under its mandate versus what would be left for potential future consideration by others consider (e.g. the distribution loss factor, specific service charges, etc.).

Group member agreed to circulate further examples for inclusion in a master list.

## **Attendance**

Bluewater Power - Kathy Gadsby  
Brantford Power - Heather Wyatt  
CNPI - Doug Bradbury  
Guelph - Jim Fallis  
Hamilton Hydro - Cameron McKenzie  
Hydro One - Mike Roger, Stanley But  
Hydro One Brampton, Scott Miller, Tony Paul  
London Hydro - Dave Williamson  
Milton - Don Thorne  
Oakville - Gary Parent  
Ottawa - Lynne Anderson  
Toronto - Anthony Lam  
Thunder Bay Hydro - Cynthia Domjancic  
Veridian - Laurie Stickwood

AMPCO - Ken Snelson  
Econalysis - Bruce Bacon, Bill Harper  
ECMI - Roger White, Andy Bateman  
EDA - Maurice Tucci; John Wong  
FOCA - John McGee  
Upper Canada Energy Alliance - Jim Richardson  
Chris Amos  
Bob Mason  
Barker, Dunn & Rossi - Pauls Zarnett

Board Staff:  
John Vrantsidis

Guests:  
Douglass Bray, Peterborough Utilities Services  
Takis Plagiannakos, Ministry of Energy  
Enersource  
Burlington Hydro