Manitoba Hydro's Prospective Cost of Service Study Methodology

Overview of Evidence of
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Agenda

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   - 2.2. What are Directly Allocated Costs?
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1. Scope of Elenchus Evidence

- Scope based on City of Winnipeg intervention
- Primary concern: A&RL class issues
  - Largest category is Directly Allocated Costs (70%)
  - Also significant distribution costs
  - Little energy consumed; hence, allocation of generation and transmission has little impact
- Secondary Concern: GSS and GSM
  - These classes have separate representation

2.1 Definitions Matter: Cost Causality

- Sounds easy and clear cut, but it isn't
- Filled with notional concepts and fictions
- Without them, we would not be able to develop cost allocation methodologies
- Fictions are useful <u>if they serve a purpose,</u> e.g.,
  - Minimum system or zero intercept – what is appropriate minimum bill – cost of being connected (standby for seasonal properties and self-generation)
- Cost allocation can inform rate design
- Challenge: Principle-driven vs. Results-driven

Who caused the goal?

Cost Causality Drives Cost Allocation

- Cost allocation "invents" ways that notionally reflect a causal link to assign blame for the costs.
- For example, how share cost of producing energy:
  - Share of kWh forecast
  - But energy is a joint product with demand
  - But cost varies by hour
- Which class caused the costs associated with this cost allocation review?
  - No causal relationship?
  - What costs were caused by each participant?

Defining Directly Allocated Costs

- General Causality Principle
  - Costs are directly allocated when facilities are used exclusively by a single class of customer; hence, caused directly by
- Direct Costs in PCOSS14: most classes have some

Residential	$ 6,615	6.8%
GSS	$10,538	10.9%
SEP	$ 642	0.7%
GSM	$ 6,429	6.6%
GSL	$10,226	10.5%
ARL	$15,331	15.8%
Diesel	$ 9,948	10.3%
Export	$37,297	38.4%

Two Types of Directly Allocated Costs

- Type #1: Asset is used exclusively and the asset type is also used for system on shared basis
  - Transformers; Poles; Wires; DSM
- Type #2: Asset is used exclusively and the asset type is not used for system on shared basis
  - Luminaires (light and fixture)
- Key question: Should inclusion of some Type #2 assets in direct allocation disqualify all directly allocated cost from the allocation of NER?
  - If practical, perhaps split directly allocated costs by type

2.2 Definitions: Directly Allocated Costs

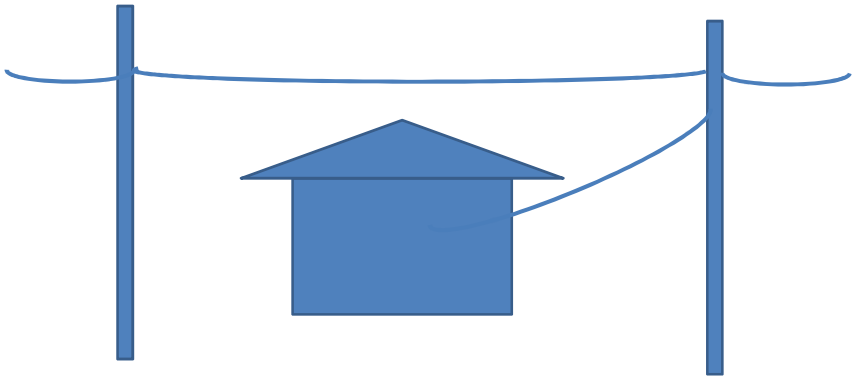
Shared vs. Exclusive Poles

Based on MH 1989 Study (2015/16 GRA, COW/MH II – 4a-l, Attachment 1)

	Distribution (Shared)	Exclusive
A. R/C Ratio	115%	125%
B. Average Rate	$9.37	$14.84
C. Ave. Cost	$8.15	$11.90
D. Cost Difference	100%	146%

Distribution Poles/Wires Configuration

Exclusive Pole: Residential

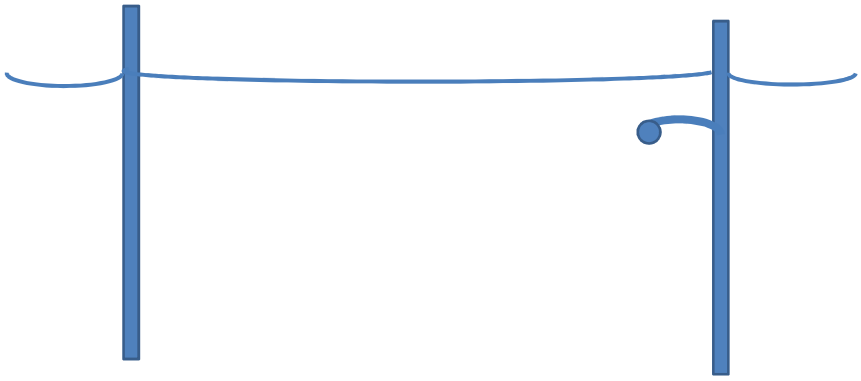


No directly allocated costs

2.2 Definitions: Directly Allocated Costs

Distribution Poles/Wires Configuration

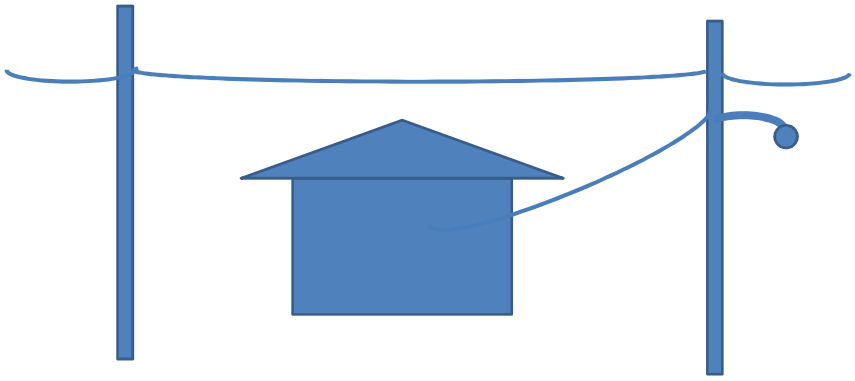
Exclusive Pole: Luminaire



Poles and Wires Configurations

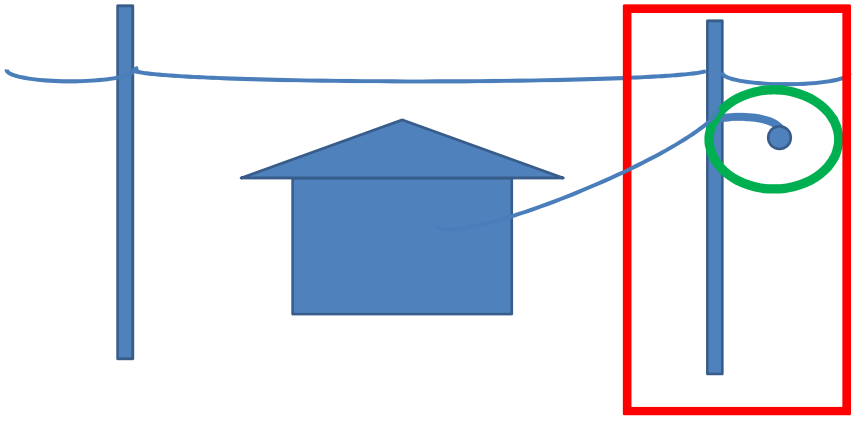
Distribution Poles/Wires Configuration

Shared Pole: Residential + Luminaire



What is analogous to appliances

Shared Pole: Residential + Luminaire



OUTDOOR LIGHTING RATE - *TARIFF NO. 2016-80*

- Exclusive Pole: A corporate-owned pole for the primary purpose of supporting outdoor lighting devices.
- Shared Pole: A pole of the primary purpose of supporting electrical circuits other than outdoor lighting.

Exclusives may be Hydro Standard

3. Allocation of Net Export Revenue

- The purpose will determine the method.
- What is the intended use of NER?
  - Purpose #1: Provide a dividend based on customer bill (total allocated costs a proxy)?
  - Purpose #2: Provide a dividend based on cost of electricity services provided (exclude fixture costs)?
  - Purpose #3: Create a segregated reserve (portion of retained earnings)
- Purposes #1 and #2 can be embedded in the cost allocation model (transparent & consistent)
- Impact of a segregated reserve will be to reduce retained earnings, given rate increase scenario

3. Allocation of Net Export Revenue

- Recommendation
  - Board should determine the intended purpose
  - There is no right answer
  - There is logic to Purpose #2
- How to implement Purpose #2
  - Define relevant Hydro assets
  - Include all poles and wires?
- Being pragmatic:
  - Avoid a split
  - Include all or nothing – which is less unfair?

4. Why Separate Street and Sentinel Classes

- Outdoor and Sentinel Lighting have different tariffs
  - Outdoor Lighting Rate – Tariff No. 2016-80
  - Sentinel Lighting Rate – Tariff No. 2016-83
- Billing allocator (C11) = weight (0.0006) * # customers (C90)
- Customer billing costs (COW/MH-I-3a-c, page 3) shows:

	Street	Sentinel	Class
2014 Alloc. Cost			$263,000
2014 # Bills	785	25,974	26,759
1991 cost/bill	$37.04	$1.98	$2.50
2014 cost/bill	***$145.57***	***$7.78***	***$9.83***