

# Electricity Cost Recovery Alternatives

Report to the  
National Energy Board

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Prepared by:

**Chymko Consulting Ltd.**

740, 1015 – 4th Street SW

Calgary, Alberta T2R 1J 4

[www.chymko.com](http://www.chymko.com)

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# 1 Executive Summary

The National Energy Board (“NEB”) engaged Chymko Consulting Ltd. as a cost recovery consultant to provide assistance in a review of the NEB’s electricity cost recovery regulations. As part of the project, Chymko Consulting was asked to research electricity cost recovery methodologies of other countries and Canadian jurisdictions and provide a written report to that effect.

Consequently, this paper presents the results of our research on electricity cost recovery methodologies in other jurisdictions. A comparison of the NEB’s electricity cost recovery methodology to these other jurisdictions will be undertaken in a subsequent paper. Following is a list of the regulatory bodies researched:

- Canadian Jurisdictions:
  - ✓ Alberta Energy and Utilities Board (“EUB”)
  - ✓ British Columbia Utilities Commission (“BCUC”)
  - ✓ Ontario Energy Board (“OEB”)
- United States Jurisdictions:
  - ✓ Federal Energy Regulatory Commission (“FERC”)
  - ✓ New York Public Service Commission (NYPSC)
  - ✓ Pennsylvania Public Utility Commission (PPUC)
- Other International Jurisdictions:
  - ✓ U.K. Office of Gas and Electricity Markets (“Ofgem”)
  - ✓ New Zealand Electricity Commission
  - ✓ Victorian (Australia) Essential Services Commission (“ESC”)
  - ✓ Australian Competition and Consumer Commission (“ACCC”)
  - ✓ Norwegian Water Resources and Energy Directorate (“NVE”)

Some common approaches from among the various regulators researched are as follows:

- The vast majority of costs are recovered from industry, even though some regulators are required to channel the payments through government. The exceptions are the ACCC and NVE, which are government funded as opposed to industry funded. The EUB is targeting a 50/50 split between government and industry funding.
- Over half of the regulators that recover costs from industry, allocate their costs to the regulated industry sectors based on some form of time tracking. Other approaches include allocating costs to transmission and/or distribution providers only (FERC and Ofgem), or spreading costs over all the regulated utilities as a whole (BCUC and NYPSC).
- Most revenue collected from industry is through a form of administrative levy, which may also be called an industry assessment or licence fee. The remaining small amounts are collected through hearing charges and other miscellaneous fees. The OEB also has a small annual registration fee to all market participants.

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- Administrative levies are generally calculated based on volume, revenue, or number of customers. Ofgem has a minimum charge payable, while the EUB waives the charge if it is below a certain level.
  - The frequency of payments varies between annual, quarterly, or monthly.
  - Cost recovery is generally based on budgeted costs for current fiscal year, with the exception of Ofgem, who uses a five-year cost projection.

Following are the salient points for each of the regulators that were researched. A summary table is also provided in the Summary and Conclusions section (Section 6).

### **Alberta Energy and Utilities Board (“EUB”)**

- The EUB regulates Alberta's energy resource and utility sectors. It ensures the discovery, development, and delivery of Alberta's resources and utilities services take place in a manner that is fair, responsible, and in the public interest.
- Over the next few years the government plans to reach a 50/50 split between government funding and industry funding for the EUB's costs (current split for 2004-05 is 43% government and 57% industry). In 2003-04, the bulk of funds received from industry were through administrative levies.
- Budgeted costs recovered by industry sector are based on the EUB's estimated percentage allocation of each of its operational group's workload.
- The annual administrative fee is weighted 75% to a company's annual revenue and 25% to its average number of customers.
- The levy for all the electric transmission sector is charged to the Alberta Electric System Operator (“AESO”)
- The levy for electric generation sector is charged to generation operators based on their marketed production, i.e., \$/MWh. If an operator's production is low enough that the annual fee is less than \$5000, the operator is exempt from charges.

### **British Columbia Utilities Commission (“BCUC”)**

- The BCUC's primary responsibility is the regulation of British Columbia's natural gas and electricity utilities.
- All of the BCUC's costs are recovered from industry. Most of it is recovered through an administrative levy and the remaining is from billing for hearings and proceedings and minor fees.
- Budgeted costs are recovered from regulated utilities in all electricity and gas sectors as a whole rather than from individual sectors.
- The administrative fee is monthly and based on volume of energy as opposed to value.

### **Ontario Energy Board (“OEB”)**

- The OEB is responsible for regulating natural gas and electricity utilities. It is also responsible for licensing market participants, market oversight, codes of conduct, consumer inquiries and complaints, and consumer information and education.

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- The OEB is funded from industry, with over 90% of its costs recovered through industry assessments. The remainder is from utility filings/hearings, interest income, and licence and registration fees.
  - Budgeted costs are recovered from individual industry classes based on tracking of the OEB's direct costs over the most recent 24-month period prior to the budgeted fiscal year. Indirect costs are allocated in proportion to direct costs.
  - There are currently three classes: gas utilities, electricity transmission, and electricity distribution. The OEB is considering whether to create two more classes for the Independent System Operator and the Ontario Power Authority.
  - The administrative fee is charged quarterly and is based on a company's portion of total revenue within its class.
  - In addition to an initial licence application fee of \$800, all market participants are subject to an annual registration fee of \$800.
  - To protect against risk of insufficient funding in a year, the OEB has established an operating reserve targeted at 15% of its annual funding requirement.

### **Federal Energy Regulatory Commission ("FERC")**

- The FERC's jurisdiction in electricity is over interstate commerce, which means that all power that goes onto the interconnected grid is subject to the FERC's jurisdiction. The federal Department of Energy ("DOE") has authority over import and export commerce - the FERC only becomes involved if a market issue arises, such as fair open access or other forms of market abuse. The FERC does not have jurisdiction over the construction or maintenance of facilities except for hydroelectric facilities.
- The FERC's costs are nearly all recovered through its Annual Charges to the industry. The FERC generally does not bill directly for an electricity filing.
- All budgeted costs for FERC's electricity program, including hearing costs and indirect personnel costs, are recovered from transmission service providers. The Annual Charges will apply to an ISO/RTO if it is the entity administering the transmission tariff.
- Annual Charges are applicable to foreign commerce if volumes originate or go beyond the first substation on the U.S. side, which represents the vast majority of foreign commerce.
- Annual Charges are based on volume of electricity transmitted in the previous year (charged in \$/MWh).

### **New York Public Service Commission (NYPSC)**

- The NYPSC regulates the state's electric, gas, steam, telecommunications, and water utilities, and also oversees the cable industry. It has responsibility for setting rates, ensuring adequacy of service, siting of major gas and electric transmission facilities, and ensuring the safety of natural gas and liquid petroleum pipelines.
- The NYPSC receives the vast majority (over 97%) of its funding from assessments on the public utilities that it regulates. The remainder is provided through government grants and minor fees.

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- Budgeted costs are recovered from all regulated sectors as a whole rather than from individual sectors, and are applicable only to regulated utilities.
  - Assessments are allocated based on utilities' gross intra-state operating revenues minus \$25,000 per utility. There is a cap of 0.33% of a utility's assessed revenue.
  - The NYPSC collects two payments per year (Feb and Aug) based on the most recent information available at the time on NYPSC's budget and utilities' audited revenues.
  - A final true-up for the previous fiscal year (ending Mar 31) is done in September/October based on NYPSC's actual costs.

### **Pennsylvania Public Utility Commission ("PPUC")**

- The PPUC regulates public utilities furnishing the following in-state services: electricity, natural gas, telephone, water, wastewater collection and disposal, steam heat, transportation of passengers and property by motor coach, truck and taxicab, pipeline transmission of natural gas and oil, and public highway-railroad crossings.
- The PPUC receives the vast majority (approx. 93%) from assessments to the utilities that it regulates. The remainder comes from fees related to specific utility filings/hearings, government grants, and miscellaneous fees.
- Budgeted costs are recovered from regulated utilities in individual sectors based on tracking of direct costs per sector - examples of sectors include electricity, gas, water, telecommunications.
- The PPUC's direct costs are allocated based on a utility's portion of gross intra-state operating revenues within its sector. Indirect costs are allocated based on a utility's portion of gross interstate revenue across all sectors.
- An assessment cannot exceed 0.3% of a utility's gross interstate revenue.
- Discrepancies between the amount collected and the PPUC's actual costs are carried over into next fiscal year.

### **Office of Gas and Electricity Markets (U.K.) ("Ofgem")**

- Ofgem is the regulator for Britain's gas and electricity industries. It has responsibility over the effectiveness of markets, regulating utilities, security of energy supplies, and social and environmental implications.
- Ofgem recovers nearly all of its costs through licence fees charged to industry (93% in 2004-05). The remainder is from property rentals and other receipts.
- Licence fees apply to regulated network utilities in electricity transmission, electricity distribution, gas transmission and gas distribution. There is a minimum annual licence fee of £500 (CAD\$1,100).
- Licence fees are based on a utility's portion of the total number of customers across all utilities for both electricity and gas – there is no tracking of costs for individual sectors. Since there is only one electric transmission company, it is deemed to have the same number of customers as all the electric distribution companies, i.e, 50/50 split.
- Licence fees are calculated based on budgeted costs averaged over a five-year period. There is a £3 million (CAD\$6.8 million) bandwidth within which actual

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costs can fluctuate during a fiscal year without requiring any change to the licence fees. As long as Ofgem's cumulative costs during its five-year period remain within the bandwidth, any differential at the end is reconciled in Year 6.

### **Electricity Commission (New Zealand)**

- The Electricity Commission was established in September 2003 to govern the electricity industry, including overseeing the operation of the wholesale and retail electricity markets.
- The Commission is fully funded by a levy on the electricity industry, which is set at the beginning of each financial year (July 1), and paid to the Commission in monthly instalments.
- Budgeted costs are recovered from all electricity industry participants, not just regulated utilities. Industry participants are divided into three classes: generators, purchasers, and lines companies.
- The Commission tracks its costs by activity group rather than by industry participant class. The budgeted cost of each activity group is allocated to participant classes based on industry consultation done in 2003.
- The levy to each class is based mainly on the quantity of electricity sold, purchased or conveyed, whichever is applicable.

### **Essential Services Commission, Victoria, Australia ("ESC")**

- The ESC regulates utility services supplied by the electricity, gas, water, ports, grain handling, rail freight industries and aspects of the insurance industry. In the electricity industry, the sectors regulated consist of generation, transmission, distribution and retailing. The ESC's primary objective is to protect the long-term interests of Victorian consumers regarding price, quality and reliability of essential services.
- Budgeted costs are recovered from each industry sector and sub-group based on tracking of costs on a project basis.
- Costs are divided into two groups: costs attributable to regulating a sector (recoverable) and other non-attributable costs (funded from government).
- Costs are recovered from a broad group of industry participants, with detailed breakdown into subgroups for individual sectors.
- The electricity distribution sector has by far the largest licence fee per company, with large retailers a distant second, but this is not necessarily an indicator of total costs recovered from each sector.

### **Australian Competition and Consumer Commission (ACCC)**

- The ACCC regulates electricity, gas, telecommunications and airports. Pertaining to electricity, it is the independent national electricity regulator specialising in the regulation of transmission and wholesale markets.
- The vast majority (99%) of the ACCC's funding is from government. The remainder (1%) is recovered from industry through miscellaneous fees.

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- The government will conduct a review of the ACCC's funding and cost recovery arrangements for its 2008-09 budget process.

**Norwegian Water Resources and Energy Directorate (NVE)**

- The NVE is responsible for administering the day-to-day affairs of water and energy resources. The functions of the NVE cover a broad spectrum of regulatory activities and, in particular, network regulation and licensing of electric activities.
- The NVE is approximately 90% financed through the state government budget. The remaining funding is from industry for specific programs, for which the NVE tracks its costs.
- The concept of partly financing all of the NVE's regulatory activities from charges to industry has been considered, but for the time being funding continues to be provided from government.



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## 2 Introduction

The National Energy Board (“NEB”) engaged Chymko Consulting Ltd. as a cost recovery consultant to provide assistance in a review of the NEB’s electricity cost recovery regulations. As part of the project, Chymko Consulting was asked to research electricity cost recovery methodologies of other countries and Canadian jurisdictions and to provide a written report to that effect.

Consequently, this paper presents the results of our research on electricity cost recovery methodologies in other jurisdictions. The jurisdictional information is categorized under one of the following three headings: responsibilities, funding and expenditures and calculation of administrative levy. A comparison of the NEB’s electricity cost recovery methodology to these other jurisdictions will be undertaken in a subsequent paper. The following is a list of the regulatory bodies researched:

- Canadian Jurisdictions:
  - ✓ Alberta Energy and Utilities Board
  - ✓ British Columbia Utilities Commission
  - ✓ Ontario Energy Board
- United States Jurisdictions:
  - ✓ Federal Energy Regulatory Commission
  - ✓ New York Public Service Commission
  - ✓ Pennsylvania Public Utility Commission
- Other International Jurisdictions:
  - ✓ Office of Gas and Electricity Markets (U.K.)
  - ✓ Electricity Commission (New Zealand)
  - ✓ Essential Services Commission (Victoria, Australia)
  - ✓ Australian Competition and Consumer Commission
  - ✓ Water Resources and Energy Directorate (Norway)

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# 3 Canadian Jurisdictions

## 3.1 Alberta Energy and Utilities Board

### Responsibilities

The Energy and Utilities Board (“EUB”) is an independent, quasi-judicial agency of the Government of Alberta with responsibility to regulate Alberta's energy resource and utility sectors. While the EUB reports to the Alberta Minister of Energy, it makes its formal decisions independently in accordance with statutes and various regulations.

The Mission of the EUB is to ensure that the discovery, development, and delivery of Alberta’s resources and utilities services take place in a manner that is fair, responsible, and in the public interest. The EUB regulates certain sectors of Alberta’s energy resources and utilities through its two core businesses:

- Adjudication and Regulation
- Information and Knowledge, i.e., collection, storage, analysis, appraisal, and dissemination of information about energy and utility matters and the knowledge associated with it.

In addition to these core businesses, the EUB is focused on four key strategic priorities:

- Public Safety and Compliance
- Utility Regulation
- Application and Hearing Process
- Investing in People.

### Funding and Expenditures

The vast majority of the EUB’s funding for its energy regulation program is derived from the combination of an Alberta government grant and a general industry levy. Funding from the Alberta government was approved to reach 40% of total funding for fiscal 2004-05, which represents an increase over the previous five years beginning from 25%. For the 2005-06 financial year, it is budgeted to increase to 43%, with the remaining 57% coming from industry. The government’s goal is to reach a 50/50 ratio over the next few years.<sup>1</sup>

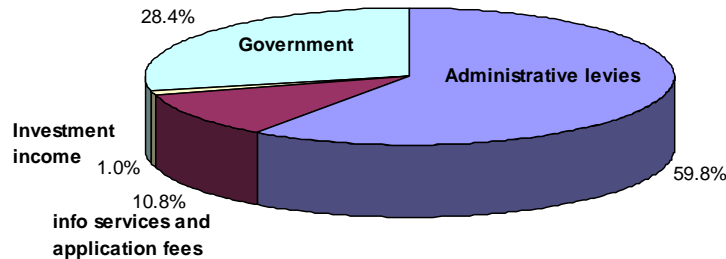
The vast majority of funds received from industry are through administrative levies, which amounted to \$79.6 million in the 2003-04 fiscal year, ending March 31. The EUB

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<sup>1</sup> Alberta Ministry of Energy 2003-2004 Annual Report, Page 58.

collected \$14.4 million in 2003-04 from the provision of information, services (including special project requests from government) and application fees. Investment income represented \$1.4 million. The remaining \$37.8 million came from the government grant.<sup>2</sup>

### EUB Cost Recovery 2003-04 (\$133.2 million)



Between the two core businesses delivered by the energy regulation program, Adjudication and Regulation accounted for 64% of the operating expenses and Information and Knowledge made up the other 36%.<sup>3</sup>

The EUB sends out invoices for the administrative levies for each of the above sectors in June, with a 30-day payment period. Late payments are subject to a penalty equal to 20% of the unpaid amount. The EUB may submit a request to government during the fiscal year (ending March 31) for additional government funding if required.

#### **Calculation of Administrative Levy**

The EUB sets its administrative levy annually based on the government-approved budget for the fiscal year. The administrative fee is collected from each industry sector. For the fiscal year 2003-04, the sectors were broken down as follows:

- Oil and Gas
- Oil Sands
- Coal
- Utilities

***Budgeted costs recovered by sector based on the estimated percentage allocation of each operational group's workload.***

***Annual administrative fee weighted 75% to annual revenue and 25% to average number of customers.***

***Levy for electric transmission sector charged to AESO***

***Levy for electric generation sector charged to generation operators based on marketed production – annual fee must be at least \$5000 else operator exempt.***

<sup>2</sup> Alberta Ministry of Energy 2003-2004 Annual Report, Page 103.

<sup>3</sup> Ibid, Page 103.

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- Electric Transmission
  - Electric Generation

Beginning in fiscal year 2004-05, the utilities sector is being broken down further into five sectors: gas retail, gas distribution, gas transmission, electricity retail and electricity distribution.

The EUB uses a model to estimate its operating costs associated with regulating each sector as equitably and objectively as the EUB infrastructure allows. Detailed activity-based costing by project or sector is not possible due to a lack of systems for tracking staff time. As a second best alternative, the operational manager for each group provides the model with the estimated percentage allocation of the group's workload by sector for the previous fiscal year. These percentage inputs are applied to the net budget cost for each group. Net budget costs include corporate support costs minus miscellaneous revenues. Corporate support costs are allocated to each group based on the group's number of full-time equivalent staff. Miscellaneous revenues are subtracted from each group's budget costs based on the group's share of total budgeted costs after building in its share of corporate support costs. The net budgeted costs are summed by sector across all the groups to obtain the dollar amounts required by sector.

The 2004 administrative fee payable by utilities was calculated using an allocation factor based on a 75% weighting for a utility's annual revenue and 25% weighting for the average number of customers served by the utility. As mentioned above, the utility sector will be broken down into five sectors beginning in fiscal year 2004-05; the allocation factor will continue to be based on the same weightings.

The levy on the electricity transmission sector covers EUB costs related to the following:

- The Alberta Independent System Operator's (AESO) transmission tariff
- Transmission Facility Owner (TFO) tariffs
- TFO facility applications
- Operations and enforcement.

The EUB assesses the full amount of the levy to the AESO based on the EUB's estimate of the costs it will incur to administer the transmission sector.

The electric generation levy is charged to the operators of power generation plants. The levy is based on marketed production, which is the total amount of electricity generated in Alberta by each operator of a power plant that is exchanged through the Power Pool of Alberta. For the fiscal year 2004-05, the levy to each power plant operator was set to

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\$0.0159/MWh of marketed production. If the annual fee for an operator amounts to less than \$5000, the operator is exempt from charges.<sup>4</sup>

## **3.2 British Columbia Utilities Commission**

### **Responsibilities**

The British Columbia Utilities Commission (“BCUC”) is an independent regulatory agency of the provincial government that operates under and administers the Utilities Commission Act (“UCA”). The BCUC's primary responsibility is the regulation of British Columbia's natural gas and electricity utilities, which encompasses tariffs, level of service, safety, commercial activities, and construction of new facilities.

The BCUC also reviews energy-related matters referred to it by Cabinet, which usually involves a public hearing, followed by a report and recommendations to Cabinet. In addition, the BCUC establishes tolls and conditions of service for intra-provincial oil pipelines. Effective August 2003, the BCUC received responsibility for the regulation of certain aspects of automobile insurance.

### **Funding and Expenditures**

Beginning in 1988, the BCUC was authorized to recover its costs from regulated utilities and pipeline companies by fixing levies.<sup>5</sup> The BCUC recovers most of its costs from a "per gigajoule" levy assessed on each utility, based on the amount of energy it sold in the previous calendar year. The BCUC also bills utilities for its public hearing costs that are attributed directly to those utilities. Direct recoveries have varied significantly from year to year, depending on the number and duration of regulatory hearings and inquiries. Minor revenues are also collected from intra-provincial petroleum pipeline companies and from other utility regulatory agencies that contract with the BCUC for advice and assistance.

Total forecasted expenses and revenues for fiscal year 2004/2005 is \$4.7 million. Annual budget surpluses are refunded back to the energy utilities in the first quarter (and sometimes the second quarter) of the following year.

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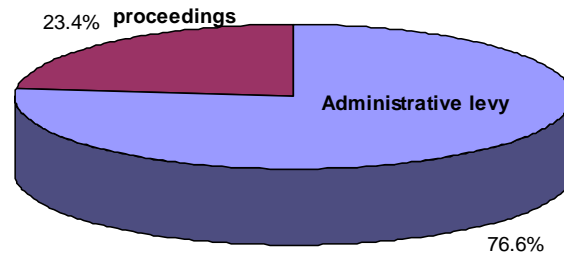
<sup>4</sup> Alberta Regulation 135/2002, Alberta Energy and Utilities Act, Administration Fees Regulation.

<sup>5</sup> Section 125 of the Utilities Commission Act and the Levy Regulation (BC Reg. 283/88).

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The BCUC's fiscal year runs from April 1 to March 31. The approved expenditure for the 2003/04 fiscal year was \$4,733,000.<sup>6</sup> Of this, \$1,098,000 was forecasted to be recovered directly from utilities for BCUC expenditures attributable to their public hearings and other proceedings under the Act. This left a net annual budget of \$3,635,000 to be recovered from the levy on \$/GJ basis. The levy amounted to \$0.00820287/GJ for the fiscal year beginning April 1, 2003, payable by utilities and others in four quarterly instalments.

### BCUC Forecasted Cost Recovery 2003-04 (\$4.7 million)



#### Administrative Levy

The Levy Regulation (BC Reg. 283/88) allows the Commission the choice to base the amount of a levy on the value or the volume of the energy transmitted or distributed or the service furnished. As described above, the BCUC has chosen to base the levy on volume of energy as opposed to value. The regulation allows the BCUC to require payment of a levy by monthly, quarterly or half yearly instalments. The BCUC has chosen quarterly payments. Finally, the regulation gives the BCUC authority to retain all levies collected by the BCUC under the regulation, i.e., the proceeds go directly to the BCUC as opposed to going through a government department for distribution.

***Budgeted costs recovered from all sectors as a whole rather than from individual sectors – applicable only to utilities that are regulated.***

***Monthly administrative fee based on volume of energy as opposed to value.***

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<sup>6</sup> British Columbia Utilities Commission 2003/04 Annual Service Plan Report, Page 31.

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## 3.3 Ontario Energy Board

### **Responsibilities**

The Ontario Energy Board (“OEB”) is a self-financing crown corporation that is responsible for regulating the natural gas and electricity utilities in Ontario. This includes approving tariffs, licensing all market participants, developing codes of conduct for marketers and retailers, responding to consumer inquiries and complaints, and providing consumer information and education. The OEB is also responsible for electricity market oversight and ensuring that regulated gas and electricity monopoly utilities comply with OEB decisions and orders. This includes conducting audits, performing compliance monitoring activities and monitoring various aspects of the gas and electricity utilities’ financial operating performance.

In the electricity sector, the OEB sets transmission and distribution rates, and approves the Independent Electricity System Operator’s (IESO) budget and fees. The OEB also sets the rate for the Standard Supply Service fixed reference price option for distribution utilities that supply electricity (commodity) directly to consumers.

OEB approval is required for the construction of electricity transmission lines longer than two kilometres. As well, the OEB is responsible for approving business arrangements involving the regulated parts of Ontario’s electricity industry, including acquisitions and mergers and disposal of assets.

### **Funding and Expenditures**

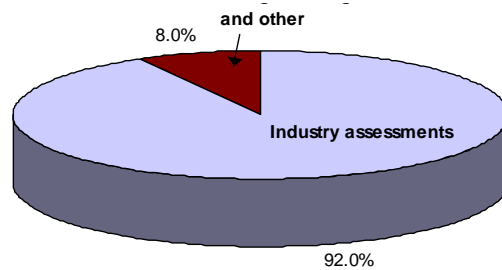
The OEB’s expenses for its fiscal year ending March 31, 2004 was approximately \$13 million. Approximately 92% of these costs were recovered through general assessments on industry participants.<sup>7</sup> The remaining costs were recovered directly from specific utility filings/hearings, interest income, and licence fees.

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<sup>7</sup> Taken from financial statements in the OEB’s 2003-04 Annual Report, Page 29.

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### OEB Cost recovery 2003-04 (approx. \$13 million)



#### Calculation of Administration Levy

The OEB recently conducted a review of its cost recovery model and made revisions. The following describes the OEB's new cost recovery model and the guiding principles used in developing it, as documented in a paper issued by the OEB in March 2005.<sup>8</sup> A discussion of the OEB's considerations in developing its new cost recovery model will be provided in our subsequent paper that will compare cost recovery methodologies between the jurisdictions researched and the NEB's methodology.

The guiding principles used by the OEB in developing its new cost recovery methodology are as follows:<sup>9</sup>

- Ultimately, customers pay all regulatory costs. The Cost Assessment Model should be clear and direct, fair, transparent, cost effective and provide incentive to use regulatory services efficiently.
- The Cost Assessment Model should ensure that ultimately costs incurred in regulating the customer groups are recovered from those customer groups.
- The Cost Assessment Model should allow the OEB to be financially self-sufficient and avoid the need to borrow funds.
- All licensed market participants should contribute to the OEB's funding.
- The Cost Assessment Model should strive for stable and predictable assessments and/or fees for market participants.
- The OEB should seek to mitigate year-over-year volatility in the apportionment of its funding requirements to each class of market participant.
- Allocation within a given class of market participants should balance fairness, accuracy and predictability where possible.

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<sup>8</sup> The paper is entitled, *Ontario Energy Board Cost Assessment Model*, dated March 14, 2005.

<sup>9</sup> *Ontario Energy Board Cost Assessment Model*, March 14, 2005, Page 5.



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In determining the amount of costs to recover through its general cost assessment, the OEB forecasts its budget requirements for the fiscal year and subtracts out its forecast of funds to be received from other sources such as utility filings/hearings, interest income, and licence fees. The net amount is apportioned among categories (classes) of market participants. The amount apportioned to each class is then apportioned to each participant within the class.

The Board only applies the general cost assessment to market participants whose rates are regulated by the OEB, whose key activities fall under the regular supervision of the OEB, and whose contribution would not lead to inequitable results for customers. Based on these criteria, the OEB selected the following three classes:

- Gas Utility Class
- Electricity Transmission Class
- Electricity Distribution Class.

The OEB will use its experience in the 2005-06 transition year for its new cost assessment model to determine whether to recommend to government to include the IESO and the Ontario Power Authority (“OPA”) as additional classes for the general cost assessment.

For the purpose of the general cost assessment, costs are divided into direct costs and indirect costs. Direct costs are costs that can be reasonably attributed to a market participant class or group of classes. The OEB has recently refined its cost tracking capabilities for the purpose of identifying direct costs and attributing them to the appropriate class. Actual time tracking data for the most recent 24-month period prior to the fiscal year being assessed will be used to apportion budgeted staff costs among classes.<sup>10</sup> The OEB also uses its judgement to apportion budgeted project costs across classes. Variations may be made to account for any significant distortion resulting from a major change in the OEB business plan.

***Budgeted costs recovered from individual classes (sectors) based on tracking of direct costs over most recent 24-month period prior to fiscal year. Indirect costs allocated in proportion to direct costs.***

***Currently three classes: gas utilities, electricity transmission, and electricity distribution.***

***Quarterly administrative fee based on a company’s portion of total revenue within its class.***

***In addition to an initial licence application fee of \$800, all market participants are subject to an annual registration fee of \$800.***

***To protect against risk of insufficient funding in a year, the OEB has established an operating reserve targeted at 15% of its annual funding requirement.***

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<sup>10</sup> For the first two implementation years of the Cost Assessment Model, only 12 months of actual historical data will be used for apportionment purposes.

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Indirect costs are all remaining costs that cannot be directly attributed to a specific class or group of classes. Some examples of indirect classes include staff costs for administrative areas and lease costs for the OEB's premises. Indirect costs will be allocated in proportion to the direct costs of a Class.

The total amount assessed to each class will be apportioned to individual companies based on each company's revenue relative to the total revenue from all companies in the class. For the Gas Utility Class, the basis will be net revenue, excluding commodity revenue. The OEB uses the most recent 12 months of audited financial results for company revenues. Assessments will be billed in four equal quarterly invoices at the beginning of the quarter.

Apart from the general cost assessment, the OEB is introducing an annual registration fee that will be applicable to all market participants. The purpose is to ensure that all market participants, not just the classes subject to the general cost assessment, contribute to funding the OEB to some extent. The annual fee will be \$800 for each license held. In addition, the OEB's existing initial license application fee will be increased from \$500 to \$800.

As the OEB will no longer be able to rely on the government for cash management and in-year funding, an operating reserve will be established by the OEB to draw on if funding is insufficient to recover the OEB's costs during a fiscal year. The reserve will also help mitigate volatility in charges to industry participants due to unforeseen circumstances. The operating reserve will be targeted at 15% of the annual funding requirement. It will be charged in 3 equal instalments over 3 years, beginning with the 2005-06 fiscal year. Operating surpluses will also contribute to the accumulated reserve. Once the 15% operating reserve is established, any deviations will be corrected in the following year.

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# 4 United States Jurisdictions

## 4.1 Federal Energy Regulatory Commission

### Responsibilities

The United States' Federal Energy Regulatory Commission's ("FERC") is an independent agency that regulates the inter-state transmission of natural gas, oil, and electricity. The FERC also regulates natural gas and hydropower projects. The FERC's responsibilities pertaining to the electricity industry include:

- Approval of rates for wholesale sale of electricity and transmission in interstate commerce for jurisdictional utilities, power marketers, power pools, power exchanges and independent system operators;
- Oversight of the issuance of certain stock and debt securities, assumption of obligations and liabilities, and mergers;
- Review of officer and director positions held between top officials at utility companies and certain firms with which they do business;
- Review of rates set by the federal power marketing administrations;
- Review of exempt wholesale generator status; and
- Certification of qualifying small power production and cogeneration facilities;

Once electricity projects become operational, safety is regulated, monitored and enforced by the state in which the project resides, with the exception of hydropower projects, for which the FERC retains jurisdiction when they are operational. With the exception of hydropower projects, the FERC has no jurisdiction over the construction or maintenance of power generating plants or transmission lines. This responsibility resides with the applicable state Public Utility Commission.

The FERC's jurisdiction in electricity is over interstate commerce, which means that all power that goes onto the interconnected grid is subject to the FERC's jurisdiction. The power doesn't actually have to flow between two or more states.

The federal Department of Energy ("DOE") has authority over import and export commerce; the FERC only becomes involved if a market issue arises, such as fair open access or other forms of market abuse. If a person wishes to export power out of the US, he must apply for DOE authorization; a filing fee, currently \$500, must be submitted with the application. The DOE is also responsible for the issuance of permits for the construction, connection, operation, and/or maintenance of electric transmission facilities at the international border.

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## **Funding**

The FERC's estimated funding for 2004 is US\$204.4 million, of which \$85.5 million was for its electric power program, excluding its hydropower activities.<sup>11</sup> The FERC has a separate hydropower regulatory program, for which it recovers its cost of administration separately from the electric power program. Also, the FERC's costs of regulating Federal Power Marketing Agencies (PMAs) are recovered directly from the PMAs.

The FERC is required to collect not only its direct costs but also its indirect costs from industry. Nearly 100% of the FERC's costs of administering its electric power program are recovered through Annual Charges to the industry. In most cases the FERC does not charge an applicant for a filing.<sup>12</sup> For the small number of situations where FERC does charge a filing fee, the fee is calculated annually based on the average time spent to perform the particular type of service and the average cost per employee, including salary, benefits, and indirect costs. In establishing a filing fee, the FERC is required to do the following:<sup>13</sup>

- Identify the service for which the fee is to be assessed
- Explain why that particular service benefits an identifiable recipient more than it benefits the general public
- Base the fee on as small a category of service as possible
- Demonstrate what direct and indirect costs are incurred by the Commission in rendering the service

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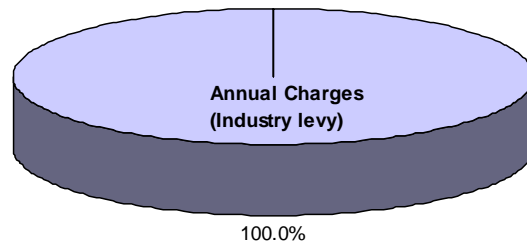
<sup>11</sup> *FY 2005 Congressional Performance Budget Request*, Federal Energy Regulatory Commission, February 2004, Page 67.

<sup>12</sup> However there are a handful of cases where fees do apply. For example there is a fee of approximately \$20,000 for a Petition for Declaratory Order, which is rarely used (not used at all in recent history and maybe only a few times in total). See the Code Federal Regulations (CFR), Title 18, Part 381 and 382 (in particular, Parts 381.302 and 381.107). Filing fees generally account for less than 1% of the FERC's funding.

<sup>13</sup> *Federal Energy Regulatory Commission FY 2004 Performance and Accountability Report: Financial Statements*, February 4, 2005, Pages 53 and 54.

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## FERC Cost Recovery for its Electric Power program (US\$85.5 million - 2004)



The Annual Charges are not applicable to foreign (international) commerce, as long as the power doesn't go past the first substation on the US side. For example, electricity imported into the US is exempt as long as it doesn't go past the first substation and enter the interconnected grid. Power exports are exempt as long as they don't enter the interconnected grid before the first substation on the U.S. side. This allows imports and exports to directly serve a specific load (import) or come from a specific generator (export) connected to the first substation on the U.S. side, without being subject to the Annual Charges. However, the large majority of export and import volumes will go to or come from beyond the first substation, and are therefore subject to the Annual Charges.<sup>14</sup>

The FERC sets the Annual Charges to recover its projected electric program costs for that fiscal year. In the next fiscal year, FERC adjusts its Annual Charges to correct for any over-recovery or under-recovery of actual costs. The Annual Charge is collected in July. Revenues are deposited into the federal Treasury as a direct offset to the FERC's appropriation from the Treasury, resulting in a net appropriation of \$0.

**All budgeted costs for FERC's electricity program, including hearing costs and indirect personnel costs, are recovered from transmission service providers. Will apply to an ISO/RTO if it is the entity administering the transmission tariff.**

**Annual Charges applicable to foreign commerce if volumes originate or go beyond first substation on US side.**

**Annual Charge based on volume of electricity transmitted- charged in \$/MWh.**

### Calculation of Annual Charges

On October 26, 2000, the FERC issued a Final Rule to revise how it calculates the Annual Charges for its electric power program,<sup>15</sup> which is still in effect. The rule indicates that the fees to fund the FERC's electric regulatory costs are to be levied on the ultimate providers of electric transmission service where such entities are in place.

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<sup>14</sup> For an example, see the Enron vs Elpaso case (Vol 77 par. 61013 and Vol 83 par. 61213).

<sup>15</sup> FERC Order No. 641, *Revision of Annual Charges Assessed to Public Utilities* (Docket No. RM00-7-000).

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Annual Charges will be assessed to public utilities that provide transmission service based on the volume of electricity transmitted by those public utilities. As a result, the FERC now only assesses annual charges on transmission rather than, as previously, assessing annual charges on both power sales and transmission.

The FERC decided to apply its charge to whichever public utility entity provides the transmission service, i.e., has a tariff or rate schedule for transmission service. If an ISO or RTO has taken over this role from individual public utilities, the ISO or RTO is responsible for paying the FERC's charge, and will be assessed based on all transmission that it provides pursuant to its tariff or rate schedule. In cases where transmission service is provided by both an ISO or RTO and an individual public utility, both entities will be assessed annual charges. Likewise, if power is transmitted over multiple transmission systems or ISO/RTO service areas, charges apply for each transmission system or ISO/RTO service area.

The Annual Charges only apply to public utilities that provide transmission service. Certain other entities are excluded even though there are limited cases where they could be considered transmitting utilities. This includes the following entities: qualifying cogenerators and small power producers under PURPA, municipal utility systems and rural cooperative utility systems financed by the Rural Utilities Service.

Each public utility must submit its total volume (MWh) of electricity transmitted in interstate (and international) commerce to the FERC by April 30 of each year. The FERC uses this data to calculate the charge in \$/MWh.

The FERC considered whether this rule would negatively affect small entities, and determined that it would not, because most if not all public utilities subject to the FERC charge do not fall under the definition of a small entity.

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## **Industry Comments on the FERC's New Calculation of Annual Charges**

Comments from industry in support of the FERC's proposed change to only charge transmission service providers recognized that the FERC's efforts are predominantly focussed on open transmission service. NYMEX stated that for a competitive wholesale power market to develop, electricity must be a fungible commodity that can be bought and sold in a competitive market without incurring excessive transaction costs. Limiting the FERC charges to transmission service providers would reduce such transaction costs, better enable the wholesale power market to respond efficiently to market-driven forces, and promote liquidity and price transparency.<sup>16</sup>

Since all parties involved in the generation and sale of electricity rely on the transmission system to move their product, they contribute to the recovery of the FERC's costs in that they will pay for using the transmission system. Any cost-based rates they pay for transmission service will indirectly pay for their share of the FERC's charges.

## **Hydropower Regulatory Program**

For the purpose of this report, the focus is on the FERC's cost recovery for its electric power regulatory program, however it is worth commenting briefly on its hydropower regulatory program. Annual charges to hydropower licensees are calculated based on a project's installed capacity for state and municipal licensees, and on a combination of installed capacity and generation output (MWh) for all other licensees.<sup>17</sup> Projects with an installed capacity of 1.5 MW or less are exempt from charges.

## **4.2 New York Public Service Commission**

### **Responsibilities**

The New York State Public Service Commission (NYPSC) regulates the state's electric, gas, steam, telecommunications, and water utilities, and also oversees the cable industry. The NYPSC has responsibility for setting rates and ensuring that adequate service is provided by New York's utilities. In addition, it exercises jurisdiction over the siting of major gas and electric transmission facilities and has responsibility for ensuring the safety of natural gas and liquid petroleum pipelines.

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<sup>16</sup> See Page 17 of FERC Order 641.

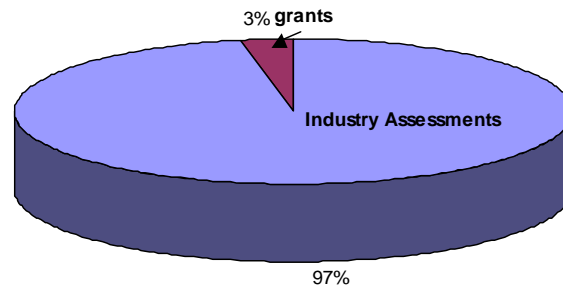
<sup>17</sup> Code of Federal Regulations, Title 18, Part 11, Section 1.

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## **Funding and Expenditures**

The NYPSC receives the vast majority (over 97%) of its funding from assessments on the public utilities that it regulates. The remainder is provided through government grants and minor fees.

**NYPSC Cost Recovery (Approx. US\$60 million)**



## **Calculation of Assessment**

Assessments are based on the NYPSC's annual forecasted budget, and are allocated to utilities based on their gross intra-state operating revenues. There is no cost allocation between different sectors. A cap has been placed through legislation on the amount a company can be charged. The cap is equal to 0.33% of a company's assessed revenue. The assessed revenue is equal to a company's gross intra-state operating revenue minus \$25,000. A rate is calculated by dividing the NYPSC's budgeted costs by the aggregated assessed revenues across all of the regulated utilities. The rate is applied to a company's assessed revenue. In order to ensure revenues are not counted more than once, transactions between energy providers, i.e., sale for resale, are factored out.

***Budgeted costs recovered from all regulated sectors as a whole rather than from individual sectors, and are applicable only to regulated utilities.***

***Assessments allocated based on utilities' gross intra-state operating revenues minus \$25,000 per utility – cap of 0.33% of a utility's assessed revenue.***

***Two payments per year (Feb and Aug): based on most recent information available at the time on NYPSC's budget and utilities' audited revenues.***

***Final true-up in Sep/Oct for previous fiscal year ending Mar 31 based on NYPSC's actual costs.***

The NYPSC collects payments on February 1 and August 1. The fiscal year ends on March 31. The NYPSC's budgeted costs for the upcoming fiscal year and revenues reported in companies' most recent annual reports are used to calculate the rate for the February 1 invoices. For the August 1 invoices, the NYPSC uses its updated budget for



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the current fiscal year and updated information on companies' revenues from their latest annual reports in order to recalculate the rate. Then in September or October, the NYPSC does a final assessment for the previous fiscal year based on its actual costs and any more recent information from companies on their operating revenues. Refunds are submitted accordingly; the NYPSC indicated that their actual costs never exceed their budget, so additional charges are not required.

### **4.3 Pennsylvania Public Utility Commission**

#### **Responsibilities**

The Pennsylvania Public Utility Commission ("PPUC") regulates approximately 6,200 public utilities furnishing the following in-state services: electricity, natural gas, telephone, water, wastewater collection and disposal, steam heat, transportation of passengers and property by motor coach, truck and taxicab, pipeline transmission of natural gas and oil, and public highway-railroad crossings. Municipal utility service is exempt from PPUC regulation, with the exception of that part furnished beyond a municipality's corporate boundaries. Rural electric cooperatives also are exempt from PPUC regulation.

#### **Funding and Expenditures**

The PPUC is funded by assessments of the regulated public utilities. The PPUC's total assessment must not exceed three-tenths of 1 percent of the gross intrastate operating revenues of the public utilities under its jurisdiction in the preceding calendar year.<sup>18</sup> Assessments are paid into the state Treasury's General Fund for use solely by the PUC.

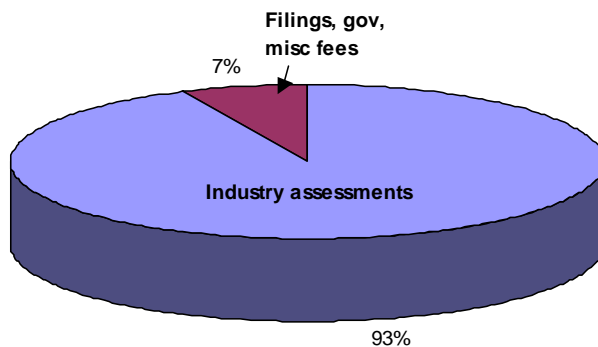
The PPUC has an annual revenue requirement of over \$40 million, of which approximately 93% is funded from its assessments to the utilities that it regulates. The remainder comes from fees and charges related to specific utility filings/hearings, government grants, and miscellaneous fees for photocopying, audits, and other.

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<sup>18</sup> The Public Utility Code, Title 66 Pa.C.S.A (SubPart B: Commission Powers, Duties, Practices and Procedures), Section 510(a).

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### PCUC Cost Recovery (US\$40-45 million)



#### Calculation of Annual Charges

Annual charges to utilities are determined based on utilities' gross revenues for intrastate business; out-of state business, including exports, are not included. Utilities must submit this information to the PPUC for the preceding calendar year, and the PPUC applies it to its fiscal year ending June 30.

The PPUC tracks its direct costs, of which salaries make up 80%, separately from indirect costs. Direct costs are recorded by staff for each utility group using time sheets, which is then used to forecast the breakdown of budgeted direct costs for the upcoming fiscal year. This amount is allocated to each utility within a group based on the utility's gross intrastate revenue as a portion of total gross intrastate revenue of the group. Electricity, gas, water, and telecommunications, are examples of separate groups.

An important point is that the allocation of direct costs is based on utilities' reported revenue from the previous calendar year and applied to the upcoming fiscal year.

For example, the allocation of the PPUC's costs for fiscal year 2005/2006 is based on utility revenues reported for calendar year 2004. No after-the-fact reconciliations are made to reflect actual utility revenues during the fiscal year to which charges are applied.

***Budgeted costs recovered from regulated utilities in individual sectors based on tracking of direct costs per sector - examples of sectors include electricity, gas, water, telecommunications.***

***Direct costs allocated based on a utility's portion of gross intra-state operating revenues within its sector.***

***Indirect costs allocated based on a utility's portion of gross interstate revenue across all sectors.***

***Assessment cannot exceed 0.3% of a utility's gross interstate revenue.***

***Discrepancies between amount collected and PPUC's actual costs carried over into next fiscal year.***

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However, discrepancies between the overall amount collected from all utilities by the PPUC and the PPUC's actual costs are carried over to the next fiscal year budget.

The PPUC's indirect costs are allocated to across all utilities in all groups based on each utility's gross intrastate revenue as a portion of total gross intrastate revenue of all utilities.

The PPUC invoices utilities once per year for the assessment. Payment is due within 30 days of invoicing.

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# 5 Other International Jurisdictions

## 5.1 Office of Gas and Electricity Markets (U.K.)

### Responsibilities

The Office of Gas and Electricity Markets (“Ofgem”) is the regulator for Britain's gas and electricity industries. Its role is to protect and advance the interests of consumers by promoting competition where possible, and through regulation where necessary. Ofgem's work focuses on the following areas:

- Making gas and electricity markets work effectively
- Regulating monopoly businesses
- Securing Britain's gas and electricity supplies
- Social and environmental responsibilities

Ofgem operates under the direction and governance of the Gas and Electricity Markets Authority (the “Authority”), which makes all major decisions and sets policy priorities for Ofgem. The Authority is a policy making body while Ofgem is an implementing body.

### Funding

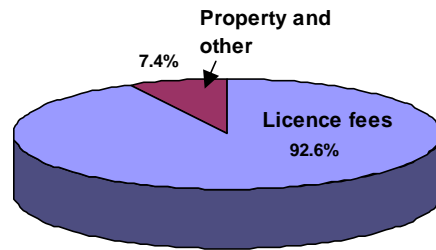
Ofgem recovers nearly all of its costs through licence fees charged to industry. In its 2004-05 fiscal year ending March 31, Ofgem received income of £51.1 million (approx. CAD\$115 million), of which £47.3 million was from licence fees and £3.8 million was from property rentals and other receipts.<sup>19</sup>

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<sup>19</sup> *Office of Gas and Electricity Markets Resource Accounts 2004-05*, Page 4.

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## Ofgem Income 2004-05 (Approx. CAD\$115 million)



Ofgem sets the licence fees based on its budgeted costs averaged over a five-year period. Under-spending or over-spending in one year does not affect the amount to be recovered through the licensing fees. There is a £3 million (CAD\$6.8 million) bandwidth within which actual costs can fluctuate without requiring any change to the licence fees. If Ofgem's cumulative costs during the five-year period go out of the bandwidth, then a correction is required. As long as Ofgem's cumulative costs during the five-year period remain within the bandwidth, any differential at the end of the period is reconciled in Year 6.

If exceptional costs arise, which cannot be recovered equitably from electricity and gas licence holders, the Gas and Electricity Markets Authority (the "Authority") may determine another method for recovery.

Payments to Ofgem are due in two instalments each fiscal year ending March 31. The first instalment is due by June 30, which covers 75% of Ofgem's forecasted costs, and the second instalment is due by January 31 for the remaining 25% of the revised forecast.

***Budgeted costs recovered from regulated network utilities in electricity transmission, electricity distribution, gas transmission and gas distribution.***

***Licence fees based on a utility's portion of total number of customers across all utilities for both electricity and gas – no tracking of costs for individual sectors.***

***Since there is only one electric transmission company, it is deemed to have the same number of customers as all the electric distribution companies, i.e. 50/50 split.***

***Minimum annual licence fee of £500 (CAD\$1,100).***

***Licence fees based on budgeted costs averaged over a five-year period.***

***£3 million (CAD\$6.8 million) bandwidth within which actual costs can fluctuate during a fiscal year without requiring any change to the licence fees.***

***As long as Ofgem's cumulative costs during five-year period remain within the bandwidth, any differential at the end is reconciled in Year 6***

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## **Calculation of Licence Fees**

Licence fees are charged to network utilities, which consist of electricity transmission, electricity distribution, gas transmission, and gas distribution.<sup>20</sup> Costs are recovered commensurate with a company's number of electricity customers in proportion to total customers. An electricity customer is defined as, "any energised or de-energised entry or exit point to the licensed electricity distribution system, where metering equipment is used for the purpose of calculating charges for electricity consumption." The total number of customers is defined as the total number existing as at September 30 each year. The minimum licence fee payable is £500 (approx. CAD\$1,100) per year.

Since there is only one electric transmission company, National Grid Company, it is allocated the same number of electricity customers as all the distribution electricity customers, i.e., costs are split 50/50 between distribution and transmission.

Ofgem has the authority to modify its fee structure, which it could consider if the existing structure fails to reflect Ofgem's true cost breakdown among industry sectors over the long term. Ofgem tracks its costs by cost centre and special project codes.<sup>21</sup>

## **5.2 Electricity Commission (New Zealand)**

### **Responsibilities**

The Electricity Commission is a Crown entity set up under the Electricity Act to oversee New Zealand's electricity industry and markets. The Commission was established on September 15, 2003 to govern the electricity industry, including overseeing the operation of the wholesale and retail electricity markets.

### **Funding**

The Commission is fully funded by a levy on the electricity industry, which is set at the beginning of each financial year (July 1), and paid to the Commission in monthly instalments. The Minister of Energy has delegated the responsibility of administering the levy to the Commission. The regulations contain provisions to allow the Commission to amend the levy during a financial year on a go-forward basis to recognise significant changes in actual costs, volumes or number of consumer connections, compared with its estimates.

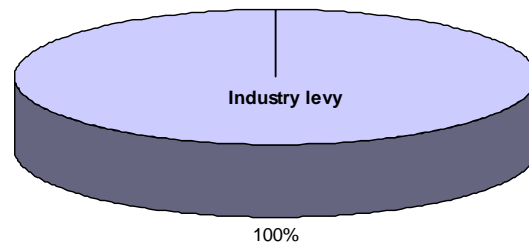
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<sup>20</sup> See Ofgem's document entitled, *Revised licence fee cost recovery principles*, March 2005 (available on Ofgem's web-site: ([www.ofgem.gov.uk/ofgem](http://www.ofgem.gov.uk/ofgem))).

<sup>21</sup> Navigant Consulting Ltd. October 28, 2004. *Ontario Energy Board Cost Assessment Model*, Page 62.

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## Electricity Commission Cost Recovery (Approx. CAD\$43 million 2004-05)<sup>22</sup>



Most of the Commission's budget (about 70 percent) is spent on service provider agreements. These agreements are with Transpower, the system operator, which is contracted to manage the electricity system in real time, and with a number of other companies that administer the electricity market.

### Calculation of Levy

The Commission's costs are segregated into activity groups and the cost of each group is allocated to various classes of industry participants. These allocated costs are converted into per-unit costs based on energy volume or number of consumers, depending on the industry participant class. These cost allocations were determined by the Commission through industry consultation.<sup>23</sup>

The following table shows how the Commission's costs are allocated by activity group and industry participant class.

***Budgeted costs recovered from all electricity industry participants, not just regulated utilities – electricity only industry regulated by Commission.***

***Industry participants divided into three classes: generators, purchasers, lines companies.***

***Commission tracks its costs by activity group rather than by industry participant class. Cost of each activity group allocated to participant classes based on industry consultation done in 2003.***

***Levy to each class based mainly on quantity of electricity***

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<sup>22</sup> See the Commission's paper, *Consultation Regarding the Levy to Recover the Costs of the Electricity Commission*, October 16, 2003, Page 2 (available on the Commission's web-site: [www.electricitycommission.govt.nz](http://www.electricitycommission.govt.nz)).

<sup>23</sup> See the Commission's paper, *Consultation Regarding the Levy to Recover the Costs of the Electricity Commission*, October 16, 2003 (available on the Commission's web-site: [www.electricitycommission.govt.nz](http://www.electricitycommission.govt.nz)).

<b>Table 1</b>			
<b>Allocation of the Commission's Costs</b>			
<b>Activity Group</b>	<b>Classes of Industry Participants</b>		
	<b>Generators</b>	<b>Purchasers</b>	<b>Lines Companies</b>
Common Quality Operations	One-third	One-third	One-third
Market Operations	One-half	One-half	
Registry and Consumer Operations		One-half to retailers	One-half to distributors
Supply Security Operations		All	
Transmission Operations			All to Transpower
Electricity Efficiency Operations		All	
Other Activities	One-third	One-third	One-third
MACQS Reform Operations	One-third	One-third	One-third

As seen in Table 1, there are three main classes of industry participants:

- Generators - companies that generate electricity connected to the grid or a local network
- Purchasers - companies that buy electricity from the wholesale ('spot') market; consists of retailers and direct-connect customers
- Lines companies – the distribution companies and Transpower, the national transmission company

The Commission's cost allocations in Table 1 are described as follows:

- Common Quality Operations: pertains to the safe and reliable operation of the electric system. The Commission's logic for allocating these costs evenly to all industry participant classes, i.e., one third to each class, is that they all benefit from the safe and reliable operation of the system.
- Market Operations: covers the pricing, clearing and settlement, the reconciliation of transactions, and market administration (including providing the market trading system). These costs are split evenly between generators and purchasers, which are the parties who use and benefit from market transactions.
- Registry and Consumer Operations: relates to registry information, customer switching, and consumer protection. These costs are split between purchasers and distribution companies; generators and Transpower do not share in paying these costs because they have no involvement in this area.
- Supply Security Operations: means the activities of the Commission that relate to its endeavours to ensure security of electricity supply. These costs are allocated 100% to purchasers because they are the ones who benefit directly from knowing that sufficient quantity of electricity is dispatched and that the least cost plant is used.



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- Transmission Operations: entails transmission agreements, grid upgrade and investments, transmission pricing methodology, and financial transmission rights. These costs are allocated 100% to Transpower, the national transmission company.
  - Electricity Efficiency Operations: relates to the promotion and facilitation of efficient use and conservation of energy. These costs are allocated 100% to purchasers.
  - Other Activities: all other activities, including the monitoring and enforcement of the Electricity Governance Rules and Regulations, costs of collecting the levy, and advice provided to the Minister as per the Electricity Act. These costs are allocated evenly across all industry participants based on an assessment that all participants affect the work of the Commission but that it is difficult to distinguish between the effect that each participant class has.
  - MACQS Reform Operations: refers to the Multilateral Agreement for Common Quality Standards (MACQS) reform process, including historical costs of developing MACQS, which was the agreement that, until 1 March 2004, governed all aspects of the metering and reconciliation process under bi-lateral trading arrangements. As the market reform operations affect the whole industry, the Commission allocates these costs evenly across all participants.

The cost allocations are converted into per-unit charges (levy) by participant class as follows:

- Generators: uses the estimated total quantity of electricity to be generated during the financial year.
- Purchasers: The estimated total quantity of electricity to be purchased during the financial year is used for all activity groups except for Registry and Consumer Operations, which uses the estimated average total number of consumer connections during the financial year.
- Distributors: uses the estimated total quantity of electricity to be conveyed by distributors during the financial year except for Registry and Consumer Operations, which uses the estimated average total number of consumer connections during the financial year.

In determining its method for allocating costs and calculating the levy, the Commission has used the following principles:

- Economic efficiency – the levy should promote efficient market behavior.
- User/causer pays – where costs are identifiable, levies should be based on who causes the costs.
- Rationality – there should be a logical nexus between participants and the costs imposed on them.

- 
- Simplicity – the levy structure should not create undue transaction costs, should treat participants equitably, and be transparent.
  - Equity – users in similar situations should be treated similarly.
  - Revenue sufficiency.

An issue worth noting was a concern from line companies that the Commerce Commission did not permit them to pass through levy costs under its price control regime. Therefore a Government Policy Statement was issued stating that the Commerce Act would be amended to require the Commission to take account of the levy when it grants authorizations relating to lines companies' prices. Pass-through for the Commission's levy would be allowed on the grounds that these costs are largely beyond the lines companies' control.

### **5.3 Essential Services Commission (Victoria, Australia)**

#### **Responsibilities**

The Essential Services Commission ("ESC"), is the independent economic regulator established by the State Government of Victoria, Australia to regulate prescribed essential utility services supplied by the electricity, gas, water, ports, grain handling, rail freight industries and aspects of the insurance industry. In the electricity industry, the sectors regulated consist of generation, transmission, distribution and retailing. The ESC is accountable through its Chairperson to the Minister for Finance.

The ESC has power to issue licences, codes and guidelines and make price determinations that regulate access to natural monopoly services. The ESC's primary objective under the Essential Services Commission Act 2001 is to protect the long-term interests of Victorian consumers regarding price, quality and reliability of essential services.

In seeking to achieve its primary objective, the ESC must have regard to the following facilitating objectives:

- Facilitate efficiency in regulated industries and the incentive for efficient long-term investment
- Facilitate the financial viability of regulated industries
- Ensure that the misuse of monopoly or non-transitory market power is prevented;
- Facilitate effective competition and promote competitive market conduct
- Ensure that regulatory decision making has regard to the relevant health, safety, environmental and social legislation applying to the regulated industry

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- Ensure that users and consumers (including low-income or vulnerable customers) benefit from the gains from competition and efficiency
  - Promote consistency in regulation between States and on a national basis

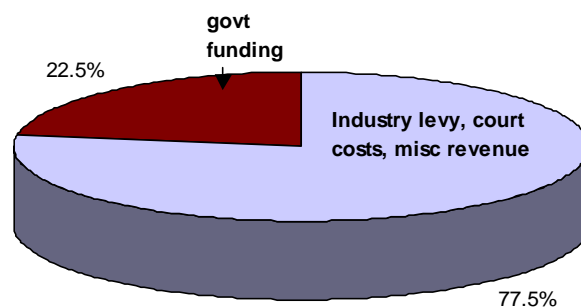
The ESC also has the following objectives under the Electricity Industry Act 2000:

- Promote a consistent regulatory approach between the electricity industry and the gas industry, to the extent that it is efficient and practicable.
- Promote the development of full retail competition.

### **Funding**

The ESC is funded from the Department of Treasury and Finance and acts on behalf of the Victorian Government in collecting licence fees. These administered revenues are controlled by the Minister for Finance. The ESC is required to pay the amounts collected into the government's Consolidated Fund, from which the Victorian Parliament appropriates funds to pay for the ESC's operations. Funding is received in the form of grants from the Department of Treasury and Finance.<sup>24</sup> The ESC's expenses for its fiscal year ending June 30, 2004 were AUD\$12.9 million (approx. CAD\$12 million).<sup>25</sup> Over the same period, the ESC's administered revenues were AUD\$10.0, which consisted mostly of licence fees collected and the remainder from court costs awarded and other revenue (public speaking fees, etc...).<sup>26</sup> The AUD\$2.9 million shortfall between expenses and administered revenues implies that the ESC may have received additional government funding other than from licence fees.

**ESC Cost Recovery 2003-04 (Approx. CAD\$12 million)**



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<sup>24</sup> *Essential Services Commission Annual Report 2003-04*, Page 61.

<sup>25</sup> *Ibid*, Page 58.

<sup>26</sup> *Ibid*, Page 73.

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## **Calculation of Licence Fees**

The Minister for Finance sets the annual licence fees payable by the regulated industry participants. The fees are determined having regard to the total amount of costs and expenses that are incurred, or are likely to be incurred, by the ESC in the exercise of its duties in relation to the particular regulated industry.

In practise, the ESC assists the Minister in determining the licence fees. The ESC adopted the following guiding principles in determining the licence fees for 2003-04:

- Licence fees should be cost reflective - the costs of regulating a sector are allocated among the licence types of that sector
- The beneficiaries of regulatory activities should incur the costs of regulation - the specific costs of projects are identified and allocated to relevant licence types to ensure an equitable allocation of costs within each regulated sector
- Licence fees should not be an unreasonable barrier to entry
- The licence fees and the cost recovery process should minimise distortions to competitive markets

***Budgeted costs recovered from each industry sector and sub-group based on tracking of costs on a project basis.***

***Costs divided into two groups: costs attributable to regulating a sector (recoverable) and other non-attributable costs (non-recoverable)***

***Costs recovered from broad group of industry participants, with detailed breakdown into subgroups for individual sectors.***

***Distribution sector has by far the largest licence fee and large retailers are a distant second largest – not necessarily an indicator of total costs recovered from each sector.***

For the purposes of developing licence fees, costs have been divided into two groups as follows:

- Costs applying to a regulated sector and therefore recoverable through licence fees
- Costs incurred in administering special references and other functions, and therefore not necessarily recoverable from the licensed entities in licence fees

The internal and external costs incurred by the ESC for the relevant year are allocated and divided according to the relevant regulated industry sector. This process is undertaken within the ESC by the deployment of a project timesheet system. The system of recording and allocating time and costs on a project basis enables the ESC to disburse the costs to regulated industries and within sectors of each industry grouping.

The following table shows the licence fees for 2003-04 by type of industry participant:<sup>27</sup>

Table 2 ESC Licence Fees: 2003-04 Fiscal Year	
Type of Licence	Yearly Fee (AUD\$)
Generation < 200 MW	\$8,944
Generation 200-999 MW	\$17,879
Generation > 1,000 MW	\$26,835
Trader	\$6,153
Transmission – Statewide	\$43,914
Transmission – Interconnector	\$21,957
Distribution	\$601,612
Inset Distribution	\$55,180
Retail < 1,000 Customers	\$11,000
Retail 1,000-50,000 Customers	\$22,000
Retail > 50,000 Customers	\$154,593

A few observations from Table 2 can be made. First, the ESC costs are being recovered from a broad group of industry participants, with quite a detailed breakdown of charges to different industry sectors. The distribution sector has by far the largest licence fee per company, with large retailers a distant second. All other participant groups have relatively small fees. However, this does not provide an indication of the amount of costs recovered from each sector: there could be a greater number of participants with lower fees compared to ones with high fees such as distribution.

## 5.4 Australian Competition and Consumer Commission

### Responsibilities

The Australian Competition and Consumer Commission (ACCC) is a multi-sector regulator covering electricity, gas, telecommunications and airports. Pertaining to electricity, it is the independent national electricity regulator specialising in the regulation of transmission and wholesale markets. The ACCC administers the Trade Practices Act, which deals with anti-competitive and unfair market practices, and performs functions under other Commonwealth legislation and State and Territory Competition Policy Reform Acts.

The ACCC's regulatory responsibilities cover:

<sup>27</sup> Extracted from ESC bulletin, *Licence Fees 2003-04* (available on ESC web-site: [www.esc.vic.gov.au](http://www.esc.vic.gov.au)).

- Regulation of the transmission network;
- Organization of the National Electricity Market; and
- Promotion and defence of competition

The ACCC also collects administered revenue on behalf of the Australian Government, which includes authorisation fees, fines and costs.

### **Funding**

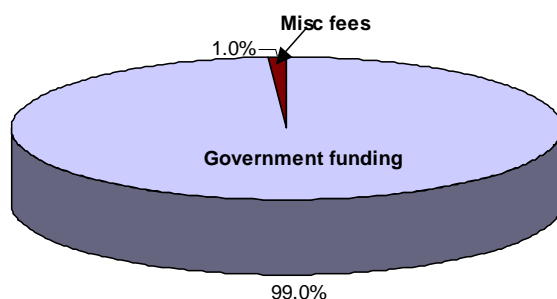
The vast majority (99%) of the ACCC's revenue requirement is provided through government appropriation rather than from industry. In its 2003-04 fiscal year, the ACCC received AUD\$74.2 million (approx. CAD\$71 million) from government appropriations.<sup>28</sup> The ACCC levies a variety of fees and charges from seminars/speakers fees, sale of publications, photocopy revenue and sale of non-current assets, however, revenue from these fees and charges only accounts for 1% of ACCC's total revenue requirements.<sup>29</sup> The ACCC also administers certain revenues on behalf of the government. In 2003-04, the ACCC administered AUD\$26.7 million, which was almost entirely from fines and costs applied by the courts.<sup>30</sup> All revenue generated by the ACCC is refunded back to government via the Consolidated Revenue Fund, with the exception of discretionary services in recognition of the costs associated with the provision of these services.<sup>31</sup>

**99% of costs funded from government – no industry funding.**

**1% of costs recovered from industry through miscellaneous fees.**

**Upcoming review of ACCC's funding and cost recovery arrangements for 2008-09 budget process.**

**ACCC Cost Recovery 2003-04 (Approx. CAD\$71 million)**



<sup>28</sup> ACCC Annual Report 2003-04, Page 129.

<sup>29</sup> Ibid. Also see the *Portfolio Budget Statements 2004-05* for the Treasury Portfolio on pages 101 to 103.

<sup>30</sup> Ibid, Pages 142 and 156.

<sup>31</sup> *Portfolio Budget Statements 2004-05* for the Treasury Portfolio, Page 101.

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A general review of the ACCC's cost recovery arrangements will be undertaken to coincide with a review of ACCC funding arrangements for the 2008-09 budget process. In addition, cost recovery issues associated with the ACCC's energy regulatory functions are being examined by governments.<sup>32</sup>

## 5.5 Water Resources and Energy Directorate (Norway)

### Responsibilities

Ultimate responsibility for regulation of the energy industry in Norway is with the Ministry of Petroleum and Energy, which is also generally responsible for energy policy. A subordinated ministerial agency, the Water Resources and Energy Directorate (NVE) is responsible for administering water and energy resources. It is intended that the NVE should have operational independence in day-to-day affairs. However its decisions can be revised by the Ministry, which also acts as court of appeal. The Government is also the owner of Statkraft, the largest electricity producer.

The functions of the NVE cover a broad spectrum of regulatory activities and, in particular, network regulation and licensing of electric activities. NVE activities in the electricity sector include:<sup>33</sup>

- Regulation of the network:
  - ✓ Setting guidelines for transmission tariffs, distribution tariffs, access conditions and monitoring them
  - ✓ Monitoring license conditions for cross border trade
- Organization of the Market - Setting guidelines for overall system operation
- Licensing - Issuing licenses for the construction and operation of electrical transmission and distribution facilities, windmills, district heating installations and gas fired power plants.
- Other - Monitoring all aspects of the evolution of the electricity market such as market structure and performance, regulation, assets, and quality of supply and energy efficiency

The NVE operates under regulations that cover the following:

- Financial and technical reporting, permitted income for network operations and transmission tariffs

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<sup>32</sup> Ibid, Page 103.

<sup>33</sup> *Regulatory Institutions in Liberalized Electricity Markets*, International Energy Agency, 2001, Pages 77-78.

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- Metering, settlement and coordination of electricity trading and invoicing of network services

One of the most important jobs of the water resource authorities (the NVE and the Ministry of Petroleum and Energy) is processing license applications for measures subject to the legislation on water resources.

The authority to make decisions pursuant to the Energy Act has largely been delegated to the NVE. The most important exception is that the Ministry of Petroleum and Energy has retained the authority to issue electricity export and import permits.

### **Funding**

Approximately 90% of the NVE's activities are financed through the state government budget. The remaining 10% is funded from industry to cover the NVE's costs of hydrological observation programs, dam-inspections, environmental watch programs, and control of foreign trade with electricity. The NVE tracks the costs of these programs and recovers them through fees charged to the companies directly associated with the programs.

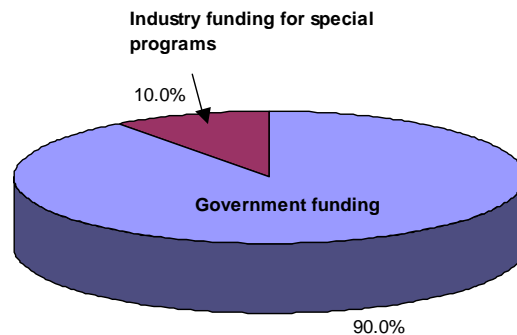
***NVE approximately 90% funded from government.***

***Remaining funding from industry for specific programs.***

***More industry funding considered but decided against for time being.***

The concept of partly financing the NVE's other regulatory activities from charges to industry has been considered, but for the time being funding continues to be provided from government.

**NVE Cost Recovery (Approx. CAD\$75 million)**





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## 6 Summary and Conclusions

Some common approaches from among the various regulators researched are as follows:

- The vast majority of costs are recovered from industry, even though some regulators are required to channel the payments through government. The exceptions are the ACCC and NVE, which are government funded as opposed to industry funded. The EUB is targeting a 50/50 split between government and industry funding.
- Over half of the regulators that recover costs from industry, allocate their costs to the regulated industry sectors based on some form of time tracking. Other approaches include allocating costs to transmission and/or distribution providers only (FERC and Ofgem), or spreading costs over all the regulated utilities as a whole (BCUC and NYSPSC).
- Most revenue collected from industry is through a form of administrative levy, which may also be called an industry assessment or licence fee. The remaining small amounts are collected through hearing charges and other miscellaneous fees. The OEB also has a small annual registration fee to all market participants.
- Administrative levies are generally calculated based on volume, revenue, or number of customers. Ofgem has a minimum charge payable, while the EUB waives the charge if it is below a certain level.
- The frequency of payments varies between annual, quarterly, or monthly.
- Cost recovery is generally based on budgeted costs for current fiscal year, with the exception of Ofgem, who uses a five-year cost projection.

The following table summarizes the key results from our research.

### Key Findings

Funding From Industry (2003-04 Fiscal Year)					
Regulator	General Source of Funding	Method of Cost Recovery From Industry	Source of Cost Recovery From Industry	Cost Allocators	Freqncy of Pymnt
EUB	Moving toward 50/50 split between govt and industry	Majority from admin. levy; remaining from services & application fees, and interest income	Costs apportioned by sector based on time-tracking	<b>For utilities:</b> weighted 75% to annual revenue and 25% to number of customers. <b>For generators:</b> energy volume	Annual
BCUC	100% industry	Mostly from admin. levy (approx. 75%); remaining from direct hearing charges	Spread over all regulated utilities as a whole (electric and gas)	Volume for gas and electricity (converted to GJ)	Quarterly
OEB	100% industry	Over 90% from admin. levy; remaining from hearing charges and misc. fees	Costs apportioned by sector based on time-tracking	Annual revenue	Quarterly
FERC	100% industry	Nearly 100% from admin. levy	Transmission service providers (incl. ISOs/RTOs)	Volume (MWh) of inter-state & international commerce	Annual
NYPSC	Over 97% from industry	Nearly 100% from admin. levy; remaining from minor fees	Spread over all regulated utilities as a whole	Gross intra-state operating revenue	Twice annually
PPUC	Nearly all from industry	Vast majority from admin. levy; remaining from hearing charges and minor fees	Costs apportioned by sector based on time-tracking	Gross intra-state operating revenue	Annual
Ofgem (U.K.)	Nearly all from industry.	Approx. 93% from admin. levy; remaining from property rentals and other	Transmission and distribution providers for electricity and gas	Number of customers as of Sep. 30 each year	Twice per year
Electricity Commission (New Zealand)	100% industry	admin. levy	Costs tracked by activity group and allocated to industry sectors based on deemed cost responsibility	Mainly energy volume	Monthly
ESC (Victoria, Australia)	Mostly industry	Mostly from admin levy; remaining from court costs and other	Costs apportioned by sector based on time-tracking	Varies by industry sector	Annual
ACCC (Australia)	99% govt; 1% ind.	Misc. fees	N/A	N/A	N/A
NVE (Norway)	90% govt; 10% ind.	N/A	N/A	N/A	N/A