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August 15, 2008

Regulatory Affairs Correspondence  
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Commercial Energy Consumers Association of British Columbia  
c/o Owen Bird Law Corporation  
P.O. Box 49130  
Three Bentall Centre  
2900 – 595 Burrard Street  
Vancouver, BC  
V7X 1J5

Attention: Mr. Christopher P. Weafer, Counsel

Dear Mr. Weafer:

**Re: Terasen Gas Inc. and Terasen Gas (Vancouver Island) Inc. (collectively the  
“Companies” or the “Terasen Utilities”)  
Energy Efficiency and Conservation Programs Application - Project No.  
3698512**

**Response to the Commercial Energy Consumers Association of British  
Columbia (“CEC”) Information Request (“IR”) No. 1**

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On May 28, 2008, the Companies filed the Application as referenced above. In accordance with the British Columbia Utilities Commission Order No. G-102-08 setting out the Preliminary Regulatory Timetable for the Application, the Terasen Utilities respectfully submit the attached response to CEC IR No. 1.

If there are any questions regarding the attached, please contact the undersigned.

Yours very truly,

**On behalf of the TERASEN UTILITIES**

***Original signed***

Tom A. Loski

Attachment

cc: Erica M. Hamilton, Commission Secretary, BCUC  
Registered Parties (e-mail only)



Terasen Gas Inc ("Terasen Gas" or "TGI") and Terasen Gas (Vancouver Island) Inc. ("TGVI") collectively the "Terasen Utilities" or the "Companies" Energy Efficiency and Conservation Programs Application (the "Application")	Submission Date: August 15, 2008
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**1.0 Reference: Exhibit B-1, Page E-4**

1.1 Terasen states it will be bringing forward additional opportunities. Please describe the process by which these opportunities will be brought forward and when that might happen.

**Response:**

Please note that the Companies state on page E-4 that:

*"...the Companies will continue to explore where the program may be enhanced as experience is gained. Should beneficial opportunities be identified the Companies **may** [emphasis added] bring additional applications forward as appropriate."*

Since the Companies have not at this time commenced expanded EEC activity, the Companies are unable to speculate as to the nature of additional opportunities that may arise or when those might be brought forward. However, given that energy costs will more than likely continue to increase over the foreseeable future, and given that British Columbians and government are continuing to focus on energy and environmental issues, including climate change, it is quite possible that the Companies may identify further opportunities to help British Columbians to reduce their energy bills prior to the end of the funding envelope proposed in the Application (2010). In that case, the Companies would bring forward an additional request for any incremental EEC funding required to the Commission, once those additional opportunities, should they exist, are identified and explored by the Companies.



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**2.0 Reference: Exhibit B-1, Page 15**

Terasen is seeking to capitalize EEC expenditures.

2.1 Please identify the cost methodology to be used in regard to capitalizing any indirect or overhead costs.

**Response:**

The Terasen Utilities have proposed to capitalize by way of a regulatory asset deferral account all of the incremental EEC expenditures, above amounts already approved as part of the TG PBR Extended Settlement and TGVI RR Extended Settlement. This includes any incremental direct costs of administering the EEC program. This does not include indirect costs or overheads which are already dealt with as part of the approve O&M Capitalization. The balance is amortized for 20 years to closely match the cost recovery to the period over which benefits will accrue to customers. All the related costs/expenses that qualify as "EEC expenditures" would be given the same financial treatment as discussed above (for details please see Section 6 of the application). Please refer to response 10.2 BCUC IR No. 1 as to why the Companies believe that proposed financial treatment is fair, reasonable and in the best interests of customers.

2.2 Please identify if Terasen proposes to capitalize any financial costs relative to the EEC expenditures deferred.

**Response:**

The Companies assume that "financial costs" alluded to are the costs of capital related to the EEC expenditures. The cost of capital is not capitalized.



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**3.0 Reference: Exhibit B-1, Page 29**

Terasen states that a yield of energy savings in \$/GJ cannot be calculated and reported in regard to load building programs.

3.1 Can Terasen determine the customer energy savings in \$/GJ equivalent for the energy displaced by the load building programs?

**Response:**

This EEC Application demonstrates the Terasen Utilities' initial comprehensive application of the California Standard Economic Tests for Demand Side Management programs. As such, the plan does show the Alternate Utility savings, using the value of avoided electricity consumption. However, there are measures where the avoided energy is not electricity; a participant may be fuel switching from fuel oil, propane or wood. Although fuel oil and propane supply prices and contracts are confidential and not publicly available due to competitive reasons, a calculation of total avoided alternative energy costs can be performed comparing current retail fuel oil and propane prices for Vancouver (excluding taxes) as per MJ Ervin & Associates Inc.'s Weekly Pump Price Survey dated August 5, 2008. This calculation does not claim to represent a customer's potential energy savings but rather represents total avoided energy costs based on published retail prices. The table below, based on Table 7.2a on page 100 of Exhibit B-1, shows the total avoided costs of energy from fuel switching, assuming that 100 % of the participants in fuel switching switched from the energy source indicated, based on a retail price for fuel oil of \$1.246 per litre for fuel oil, converted to \$32.15 per GJ, and on a retail price for propane of \$0.762 per litre, converted to \$30.02 per GJ. As noted in the response to BC Hydro 1.1.1, participants in fuel switching programs will be switching from a number of energy sources, so an exact breakdown of customer savings per GJ cannot be provided, as the Companies cannot predict the proportion of participants switching from each energy source.

Fuel Switching Customer Bill Savings					
Activity Description	Consumption (GJ)	Cost per GJ of Propane	Cost per GJ of Gas	Carbon Tax differential per GJ	Total Customer Bill Savings
Fuel Switching - Propane to Gas	2,277,000	\$30.02	\$11.00	\$0.11	\$43,559,374.32
Fuel Switching - Heating Oil to Gas	2,277,000	\$32.15	\$11.00	\$0.20	\$48,608,075.34



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#### 4.0 Reference: Application, Page 33

4.1 The Application states that “while this decline in usage rates can, to some degree, be attributed to customer response to increased costs for energy, increased building and equipment efficiency can also be credited.” Can the Applicant itemize specifically what increase building and equipment efficiency changes occurred in those years to result in the decline in usage?

#### **Response:**

No analysis has been done on specific building and equipment changes over this time period. Rather, the statement reflects that there is a changing mix of appliances that occurs over time as older, inefficient equipment is replaced with new equipment (some of which is influenced by the Companies’ programs), and the total building stock evolves as new, more efficient buildings become part of the building stock.



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## 5.0 Reference: Exhibit B-1, Page 37

Terasen states that its intent is to bring its expenditure per customer on conservation initiatives closer to those of other utilities in BC.

- 5.1 Why would Terasen choose policy intent based on what others are doing rather than on an assessment of the conservation opportunity available and not yet captured for customers?

### Response:

The Companies have not "chosen policy intent based on what others are doing". The expenditure levels requested in the Application were derived as outlined in Section 6.2 of Exhibit B-1, the Application. The expenditure levels were based in part upon the Habart refinement of the Conservation Potential Review, which did, in fact, assess the conservation opportunity available and not yet captured for customers. The statement referenced in the question reads in full:

*"It is the Terasen Utilities intent with this Application to bring expenditure per customer on conservation initiatives close to the level of other utilities in British Columbia, **expanding the Companies' customers' access to more opportunities to conserve** [emphasis added]."*

Thus the Companies recognize that previously-approved levels of EEC expenditures did not capture all the conservation opportunity available to customers and are stating that bringing expenditure levels closer to those of other British Columbia utilities will start to capture more of the conservation opportunity available to customers.

- 5.2 Can Terasen identify what percentage of its assessed available opportunity its proposed programs are aimed at capturing and can Terasen contrast that with the percentage of assessed available opportunity BC Hydro's programs are aimed at capturing?

### Response:

For a discussion of the amount of the Terasen Utilities most likely achievable potential captured in this EEC Application, please see the response provided to BCSEA SCBC IR 1.16.1.

Per BC Hydro's 2007 Conservation Potential Review, approximately 20,000 GWh per year of potential energy savings was identified as being viable by the year 2020. Based on this assessed available opportunity, BC Hydro has set a goal of 50%, of the potential energy savings as being achievable by the year 2020



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In BC Hydro's Long Term Action Plan, BC Hydro considered two options for resource planning purposes and decided that Option A was the plan that more closely aligned to the 2007 CPR. Option A resulted in planned energy savings of 10,820 GWh per year which approximates 50% of the assessed available opportunity.

Sources:

<http://www.llbc.leg.bc.ca/public/PubDocs/bcdocs/431498/info54519.pdf>

[http://www.bchydro.com/rx\\_files/info/info57678.pdf](http://www.bchydro.com/rx_files/info/info57678.pdf)



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## 6.0 Reference: Application, Page 37

The Application refers to DSM activity being carried out by third party agencies such as in Oregon. The CEC is interested in exploring this concept in British Columbia and would ask the Applicant to elaborate on its views on the use of a third party agency to conduct DSM activities given the significant investments that customers are being asked to make in British Columbia by the utilities operating in British Columbia.

6.1 What are the advantages and disadvantages to a privately owned utility such as the Applicant in utilizing a third party agency in British Columbia to conduct DSM activities?

### **Response:**

Please see the response provided to BCUC IR 2.26.1.

6.2 What does the Applicant see as the advantages and disadvantages for a crown corporation, BC Hydro, in terms of having DSM activities conducted by a third party agency?

### **Response:**

Please see the response to IR 6.1. The Companies' view is that the same advantages and disadvantages would apply to BC Hydro.

6.3 What does the Applicant see as the advantages and disadvantages for:

- (a) residential customers;
- (b) commercial customers; and
- (c) industrial customers,

in having DSM activities carried out by a third party agency? For the purpose of the analysis assume the third party agency is a non-government agency

- (a) residential customers;





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**Response:**

Please see the response to CEC IR 1.6.1

(b) commercial customers; and

**Response:**

Please see the response to CEC IR 1.6.1.

(c) industrial customers,

**Response:**

The Companies are not proposing any expenditures or programs for Industrial customers in this Application.

- 6.4 Has the Applicant had any discussions with any other utilities in British Columbia around the potential for having DSM activities conducted by a third party agency? If so, provide the detail and the results of those discussions

**Response:**

No, the Companies have not had any specific discussions with other utilities in British Columbia around the potential for having DSM activities conducted by a third party agency. Please see response to CEC IR 1.6.1.



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## 7.0 Reference: Application, Page 37

The Application states that BC Hydro has proposed that its Power Smart expenditures increased significantly for fiscal 2009 and fiscal 2010 to \$105 million and \$122 million respectively, more than 24 times the amount that the Applicant will invest in EEC activity in 2007.

7.1 Does the Applicant have a view as to whether BC Hydro is overspending on DSM activities or do they believe that BC Hydro's investments are appropriate notwithstanding they are 24 times the amount of the Applicant will invest in EEC activity in 2007?

### **Response:**

The Companies do not have a view as to whether BC Hydro's planned DSM expenditures are too high or too low. The Companies note that while BC Hydro's planned DSM spending levels are higher than in the past the 2007 Energy Plan and Bill 15 have established a high threshold for BC Hydro of meeting 50% of load growth by 2020 through DSM energy savings. The appropriateness of BC Hydro's DSM plans and spending levels will be reviewed and ultimately determined by the Commission in BC Hydro's 2008 LTAP proceeding.

7.2 Did the Applicant consider spending more on EEC activities and if so, how did it arrive at the conclusion that the amount proposed in the application is appropriate?

### **Response:**

Please see Section 6.2 of Exhibit B-1, the Application, for an explanation as to how the amount proposed in the Application was developed. The Energy Efficiency and Fuel Switching budget amounts were developed "from the bottom up" by estimating incentive levels, numbers of participants and program costs. The budget amount for Conservation Education and Outreach was developed in consultation with the Companies' advertising agency. The budget amounts for Trade Relations and for Innovative Technologies were developed based on the Companies' best judgement and experience, as outlined in the responses to BCUC IR 32.0 and 33.0, as was the budget amount for Joint Initiatives.



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**8.0 Reference: Application, Page 43, 3.6.2, Municipal Policies**

8.1 Describe how the Applicant will prioritize which municipalities will gain access to initiatives aimed at energy efficiency and conservation.

**Response:**

Municipalities are generally treated as other commercial customers. Once a budget amount and program parameters are developed for a certain program or measure, applications are submitted by participants and if the participant meets the requirements of the program parameters, and if there is funding remaining in the program budget, a participant's application is approved.



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**9.0 Reference: Exhibit B-1, Page 45**

9.1 Terasen shows the opportunity identified in its CPR. Please relate this identification of opportunity to the proposed EEC programs and the proportion of this identified opportunity that Terasen is aiming to capture?

**Response:**

Please see the response provided to BCSEA IR 1.16.1.



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## 10.0 Reference: Application, Page 48, Program Principles

The 14<sup>th</sup> principle referenced on page 48 states "consideration may be given by the Companies to consolidate Terasen Utilities EEC stakeholder activity with stakeholder currently being undertaken by the Utilities in order to reduce potential 'stakeholder'".

10.1 Please elaborate on what, if any, discussions have occurred with BC Hydro or other utilities in British Columbia to facilitate this.

### Response:

The Companies note that the excerpt, as referenced above from page 48 was incomplete and should read, "...in order to reduce potential 'stakeholder *fatigue*'." (emphasis added). The Companies have not had any specific discussions with BC Hydro around the details of potential stakeholder activity consolidation. The discussions have been at a very high level around ways to mitigate potential stakeholder fatigue.

10.2 Please describe what efforts have been made to date to coordinate the demand side management initiatives proposed by BC Hydro in its ongoing investment in conservation and the efforts of the Applicant.

### Response:

Please see the response to BCUC IR 1.77.1. The Companies' view is that it is the role of the British Columbia Partnership for Energy Conservation and Efficiency (BCPECE) to ensure that there is no material overlap in programs offered by BC Hydro with programs offered by the Applicant. On a working level, the Companies have a track record of partnering with BC Hydro in offering programs, such as the motor component of the Companies' furnace upgrade program.

10.3 How does the Applicant see supporting stakeholder involvement in these consultations?

### Response:

As outlined in Section 6.14.2 of Exhibit B-1, the Application, the Companies are proposing annual stakeholder workshops on EEC activity. Should a stakeholder determine that they require support by way of funding in order to participate in the proposed stakeholder group, the Companies believe that such funding applications would be made by stakeholders directly to the Commission in accordance with the Participant Assistance/Cost Award Guidelines issued pursuant to Commission Order No. G-72-07.



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**11.0 Reference: Application, Section 6.3.2, Commercial and Energy Efficiency Program Area (\$21.7 Million)**

11.1 The Application states at page 63 that the Applicant's staff will work with the participants in selecting the most appropriate program and/or component. Please describe how the Applicant will prioritize programs and given the benefit which will accrue to participants in programs, determine how participants will be selected.

**Response:**

A particular program or component of a program may be more applicable to some commercial customers or participants than others. Customers will apply for programs and, after receiving applications, the Terasen Utilities' staff will review to determine if the customer meets the application criteria. If the participant meets the application criteria, and there are funds available for the program, the participant will be eligible to receive funding. However, the participant may have applied for one program when in fact they may be better served by another program. The Companies' larger Commercial and light Industrial customers have Companies' Account Managers who work with these customers on a regular basis. In many cases some of these customers would have already received energy audits. Using the knowledge of the customer, and energy audits if they exist, the Companies' Account Managers would be in a position to recommend alternative programs that may better meet the needs of the customer.



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**12.0 Reference: Application, Page 70, Section 6.9.1, Innovative Technologies**

12.1 The programs described could fall under a heading of research and development. Explain why ratepayers should be paying for research and development initiatives as opposed to the shareholder.

**Response:**

Please see response to BCUC IR 1.33.1.



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**13.0 Reference: Exhibit B-1, Page 75**

13.1 Terasen explains its interest in obtaining biogas. Has Terasen contemplated selling 'green gas' at a premium much as electric utilities have sold 'green electricity' as a product?

**Response:**

The Terasen Utilities are still in the early stages of evaluating what is the most effective use of the biogas. A "green gas" offering is a possible use of the biogas but at this time further analysis is required to determine the most appropriate use.





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**14.0 Reference: Application, Page 80, Section 6.1.2, Financial Treatment for Energy Efficiency and Conservation Expenditures**

14.1 Please explain how the accounting proposed for the EEC investments impacts on the existing performance based regulation regime in which the Applicant is operating.

**Response:**

With this Application, the Companies are requesting approval for incremental expenditures over and above amounts already approved under the TG PBR Extended Settlement and the TGVI RR Extended Settlement. The proposed accounting treatment for the incremental EEC expenditures will not result in any changes to the terms of the TG PBR Extended Settlement or the TGVI RR Extended Settlement.

14.2 What impact will approval of the application on the shareholder under the PBR mechanism?

**Response:**

The Shareholder will earn a return on the equity portion (currently at 35.01% for TGI and 40.0% for TGVI) of the deferral account balance at the allowed Return on Equity as approved by the Commission on an annual basis.



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**15.0 Reference: Exhibit B-1, Page 85**

Terasen shows its evaluation of the EEC programs based on the standard tests.

15.1 Please contrast Terasen's non-participant, participant and TRC tests for its programs with the same tests for BC Hydro's programs.

**Response:**

The three tables below provide the information requested. Please note that BC Hydro does not provide the results for the Participant Test:

<b>BC HYDRO 2008*</b>				
		Utility Test	Non-Participant Test (RIM)	All Ratepayers Test (TRC)
Residential Sector Total		2.3	0.9	2.0
Commercial Sector Total		2.3	0.8	2.1
Industrial Sector Total		3.0	2.1	1.1
<b>Total Energy Efficiency Program</b>		<b>2.6</b>	<b>0.9</b>	<b>2.0</b>

<b>TERASEN 2008 - 2010 (including Free Riders)**</b>				
	Participants Test	Utility Test	Rate Impact (RIM)	Total Resource (TRC)
<b>2008-2010 (NPV 2007)</b>				
Residential Energy Efficiency	14.4	2.6	0.6	2.4
Commercial	7.9	3.3	0.7	3.7
<b>2008-2010 Energy Efficiency Subtotal</b>	<b>8.7</b>	<b>3.1</b>	<b>0.7</b>	<b>3.5</b>

<b>TERASEN 2008 - 2010 (excluding Free Riders)***</b>				
	Participants Test	Utility Test	Rate Impact (RIM)	Total Resource (TRC)
<b>2008-2010 (NPV 2007)</b>				
Residential Energy Efficiency	13.7	3.5	0.6	3.1
Commercial	7.9	3.8	0.7	3.9
<b>2008-2010 Total</b>	<b>8.8</b>	<b>3.7</b>	<b>0.7</b>	<b>3.7</b>

\* Source: BC Hydro 2008 Long Term Acquisition Plan, Appendix K, Implementation Plan for Energy-Focused Demand Side Management, p.117

\*\* Source: Exhibit B-1, Appendix 11A, p.1

\*\*\* Source: Exhibit B-2 , Appendix 11B, p.1



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A number of points should be noted when comparing the two sets of results.

1. BC Hydro has a series of Industrial programs which the Terasen Utilities do not plan to offer at this time. The benefit / cost ratios for the industrial programs are higher than for the residential and commercial programs, and improve the overall energy efficiency program numbers. Therefore it is more useful to compare just the numbers for the residential and commercial sector programs.
2. Both the utility cost test and total resource cost test numbers are higher for the Terasen Utilities' programs than they are for the BC Hydro programs for the same sectors.
3. The non-participants test (RIM) ratios are lower for the Terasen Utilities' programs than for the equivalent sector programs for BC Hydro' programs. This is further explained in the response to the next question.

15.2 Please explain whether or not Terasen has significant differences between itself and BC Hydro relative to effects of DSM on participants and non participants.

**Response:**

There is a fundamental difference in the relationship between costs and rates for the Terasen Utilities and BC Hydro which affects the RIM test.

The RIM test measures the benefits and costs of a DSM program from the perspective of the effect that it may have on rates. A RIM Benefit / Cost ratio of less than one means that the program will provide upward pressure on rates<sup>1</sup>.

The Benefits measured in the RIM test are the "saved" marginal cost of energy multiplied by the amount of energy saved. The Costs measured in the RIM are the sum of the DSM program costs, the incentives paid, and the foregone revenue that would have been earned without the program. The foregone revenue is the rate multiplied by the amount of energy saved.

The fundamental difference between the Terasen Utilities and BC Hydro is that the Terasen Utilities' marginal cost is less than its rates while BC Hydro's marginal cost is greater than its rates. This means that for similar programs, the Terasen Utilities will have a lower RIM than BC Hydro as the Terasen Utilities' marginal cost (the numerator) is relatively lower than rates (the denominator) while BC Hydro's is the opposite.

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<sup>1</sup> There are a number of factors that affect rates, and the size of the net cost of DSM programs relative to other factors may be quite small. Therefore it is more appropriate to note an "upward pressure" on rates rather than to say they will increase rates



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BC Hydro's marginal costs are higher than rates, which largely reflect the "heritage" investment in large hydro electric projects which help keep rates low relative to the marginal cost of adding new supply.

15.3 If Terasen sees a difference what if any policy approaches to the difference does Terasen have?

**Response:**

Within this EEC Application, the Companies are proposing that the appropriate cost-benefit approach for the EEC Portfolio proposed in the Application is that the overall portfolio maintain a cost-benefit ratio of 1.0 or greater.

In general, it is the view of the Companies that BC Hydro's rates should more closely reflect marginal costs.



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**16.0 Reference: Exhibit B-1, Page 100, Table 7.2a**

Terasen shows a table of the customer bill impacts.

16.1 Terasen shows fuel switching relative to electricity but does not show any account for switching from oil to natural gas. As this would be conservation from a customer's point of view why is it not included in the table? Is that because Terasen will not be pursuing any fuel switching from oil to natural gas or because it is viewed as load building and not an EEC program?

**Response:**

The Companies will indeed be pursuing fuel switching from oil to natural gas – please see the response to CEC IR 1.3.1 for an explanation as to why Table 7.2a shows the effects of fuel switching relative to electricity, and customer savings from fuel switching from other energy sources, as well as BC Hydro IR 1.1.1. The Companies feel strongly that fuel switching from oil to natural gas is a conservation program – not only does the customer reduce their environmental impact by moving from a higher carbon fuel (heating oil or propane) to a lower carbon fuel (natural gas) but also because natural gas produces fewer criteria air contaminants than heating oil and propane.

16.2 If Terasen is pursuing fuel switching from oil to natural gas can that initiative be shown in the same format as this table to show the total customer conservation?

**Response:**

Please see the responses to CEC IR 1.3.1 and 1.16.1.