NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF The Public Utilities Act, R.S.N.S. 1989, c.380, as amended

-and -

IN THE MATTER OF An Application by Nova Scotia Power Inc. for Approval of an Open Access Transmission Tariff

DIRECT TESTIMONY

OF

ROBERT M. FAGAN

APRIL 5, 2005

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EXHIBITS

I. introduction and qualifications

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Robert M. Fagan. I am a Senior Associate at Synapse Energy Economics, Inc., 22 Pearl Street, Cambridge, Massachusetts, 02139.

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE AND EDUCATIONAL BACKGROUND.

A. I am an energy economics analyst and mechanical engineer with 19 years of experience in the energy industry. My work has focused primarily on electric power industry issues, especially economic and technical analysis of competitive electricity markets development, electric power transmission pricing structures, and assessment and implementation of demand-side resource alternatives. I hold an M.A. from Boston University in Energy and Environmental Studies and a B.S. from Clarkson University in Mechanical Engineering. Details of my experience are provided in Exhibit RMF-1.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NOVA SCOTIA UTILITY AND REVIEW BOARD?

A. No, I have not testified previously before the Nova Scotia Utility and Review Board ("Board").

Q. HAVE YOU TESTIFIED BEFORE OTHER REGULATORY BODIES ON RELATED TRANSMISSION TARIFF ISSUES?

A. Yes. I testified in three separate sets of transmission proceedings in Ontario and Alberta in 2000, 2001 and 2002-2003. In 2000, I critiqued Ontario Hydro Network Inc.'s proposed cost allocation and rate design and proposed an alternative approach, on behalf of the Independent Power Producers' Society of Ontario. In 2001, I critiqued certain aspects of Alberta's then-transmission administrator's proposed implementation of the supply transmission service tariff as it pertained to holders of power purchase agreements ("PPAs"), on behalf of a group of PPA holders.[1] In 2002-2003, I submitted multiple rounds of direct and rebuttal testimony in the Ontario Transmission System Code proceeding, on behalf of TransAlta Energy Corp. This work is further detailed in my resume attached as exhibit RMF-1.

Q. DO YOU HAVE ADDITIONAL WORK EXPERIENCE REFLECTING THE NATURE OF OPEN ACCESS TRANSMISSION TARIFF ISSUES?

[1] This was joint testimony submitted in concert with Dr. Richard Tabors of Tabors Caramanis & Associates.

A. Yes. I have worked almost exclusively on wholesale electricity market issues and transmission pricing alternatives for the past eight years.[2] I am familiar with the workings of restructured markets in the US and Canada, namely the northeastern ISO/RTO regions of New England, New York and PJM, the Midwestern RTO region, and Ontario and Alberta. Subsequent to the issuance of FERC Order 888, I consulted with numerous clients on open access issues and alternative transmission pricing structures, focusing especially on the nature of competitive wholesale electric markets and the different alternatives for transmission pricing to recover both variable and embedded costs.

Q. PLEASE DESCRIBE SYNAPSE ENERGY ECONOMICS.

A. Synapse is a research and consulting firm that specializes in energy, economic and environmental topics. Our primary emphasis is in analyzing policies that lead to sustainable, efficient and equitable energy production and use. Synapse provides research, testimony, reports and regulatory support to consumer advocates, environmental organizations, regulatory commissions, state energy offices, and others. The company was founded in May 1996 to specialize in consulting on electric industry regulatory, restructuring, and environmental issues. We have a staff of fifteen.

[2] As described in my resume attached as Exhibit RMF-1, I was employed at Tabors Caramanis & Associates during this period. I have been employed at Synapse Energy Economics since December 2004.

II. purpose, organization and Summary of testimony

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to evaluate Nova Scotia Power Inc.'s (NSPI) Open Access Transmission Tariff (OATT) proposal. I focus on seven specific areas. Those areas are:

1. Comparison of the NSPI tariff to Canadian and US OATTs;
2. Assessment of whether or not the NSPI OATT is FERC compliant;
3. Evaluation of the compatibility of the NSPI tariff with the New Brunswick Power tariff;
4. Review of NSPI's proposed Standard Generation Interconnection Procedures;
5. Review of the appropriateness of computation of total transmission capability (TTC), available transmission capability (ATC) and related metrics;
6. Examination of the proposed open access same-time information system (OASIS); and
7. Examination of the appropriateness of NSPI's tariff rate computations for transmission and ancillary services.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. My testimony is organized into four parts. After the introductory section, I state the purpose of my testimony and summarize the main observations, conclusions and recommendations. I next provide background on the OATT and its application to Canadian entities. I then address each of the seven specific areas noted above.

Q. IS IT POSSIBLE THAT YOU WILL FILE SUPPLEMENTARY EVIDENCE?

A. Yes. In a letter to the Board dated February 16, 2005, the Company noted that, after it has received and reviewed the Board's decision in the 2005 General Rate Proceeding, it may update its OATT application. I may file supplemental evidence to address issues raised by NSPI's update.

Q. PLEASE SUMMARIZE YOUR MAIN OBSERVATIONS, CONCLUSIONS AND RECOMMENDATIONS.

A. My main observations, conclusions and recommendations are as follows:

1. The intent of FERC's Order 888 and its implementation through the use of a *pro forma* open access transmission tariff is to "remedy undue discrimination in access to the monopoly owned transmission wires that control whether and to whom electricity can be transported [in the Maritimes and New England region]".
2. New Brunswick's tariff contains a reciprocity provision which effectively requires Nova Scotia Power to have in place an open access tariff as a condition of access to their grid.
3. Nova Scotia does not need an OATT to open the Province to competition; however, obtaining reciprocal access over the New Brunswick system can only help to directly access potential generation resources in Quebec and New England.
4. There are two notable areas of difference between the *pro forma* OATTs present in other Canadian jurisdictions, and the OATT proposed for Nova Scotia:
    a. The imbalance energy provisions in NSPI's proposal contain additional criteria that 1) imbalance energy deviations will be settled separately for load and generation; and 2) non-dispatchable energy will be settled hourly. These provisions are not present in any of the other Canadian OATTs.
    b. NSPI's proposed tariff, like New Brunswick's existing tariff, does not use FERC's Load Ratio Share rate method for cost allocation, which is used in the other Canadian *pro forma* OATT's.

5. To attain a FERC-compliant OATT, NSPI needs to amend its proposed OATT to reflect comparable pricing of transmission services between OATT users and NSPI's own use of the system to serve its bundled native load. NSPI should use a cost allocation approach similar to that used for its bundled native load when determining its OATT rates.
6. To attain a FERC-compliant OATT, NSPI needs to amend its proposed OATT to reflect comparable pricing of ancillary services between OATT users and NSPI's own use of the system to serve its bundled native load. NSP proposed a "proxy" unit method for the OATT, while using embedded costs for bundled service. A common pricing methodology should be used. Since NSPI remains a regulated company likely providing the bulk of ancillary services at least in the near term, that common method should be embedded cost.
7. In order for the proposed OATT to be FERC compliant and meet New Brunswick's reciprocity requirements, the energy imbalance provisions must provide comparable pricing across users of the system. At a minimum, imbalance energy should be settled on net deviations, and not separately settled for load and generation; and treatment afforded non-dispatchable generation serving load should not be different than treatment afforded dispatchable generation serving load.
8. The pricing provisions for imbalance energy service should be reviewed carefully to ascertain if there is any cost basis to justify the effective adders proposed by NSPI. At this time, there has been no evidence put forward to support the adders.
9. A stranded cost recovery provision is not warranted as part of the OATT. The OATT application is severable from any processes required to determine if stranded costs exist, and if so how they should be recovered.

10. The Standard Generation Interconnection and Operating Agreement proposed by NSPI should be modified to include the original intent of FERC's Order 2003, as affirmed in Orders 2003-A and 2003-B. NSPI's proposal currently excludes a provision that allows for 100 percent recovery of network upgrade costs borne by transmission customers as a requirement for interconnection.
11. NSPI's current policies for interconnecting small generators should be adapted, when technically appropriate, to include certain small generators – e.g., less than 20 MW, but possibly even greater than 20 MW – who connect at the 69 kV voltage level. This will help to minimize barriers to entry for any non-NSPI generation supplier. NSPI's procedures for small generators should be codified, resulting in transparent procedures and helping to ensure non-discriminatory treatment across all potential newly interconnecting generators.
12. NSP should revise the transmission rate computations to reflect comparable cost allocation methods between OATT users and bundled service load.
13. Some aspects of the ancillary service tariff rate computations associated with the embedded cost alternative appear unclear. I suggest that the parameters used to assign embedded costs to ancillary services be carefully reviewed by NSPI, Board staff, and interested intervenors to establish common ground for the allocation of embedded costs to ancillary services.

III. OATT background

FERC Order 888 and 889 and the Pro Forma Tariff

Q. PLEASE SUMMARIZE THE SALIENT PROVISIONS OF FERC ORDERS 888 AND 889, THE PRO FORMA TARIFF, AND THEIR APPLICABILITY TO NOVA SCOTIA.

A. FERC Orders 888 and 889[3] were issued subsequent to a FERC Notice of Proposed Rulemaking and were intended to create a transparent, non-discriminatory open access framework for wholesale use of most of the transmission grid in the US. The *pro forma* tariff was included as an attachment to Order 888, and provided utilities with a template for required filing of an open access tariff. Order 888 addressed the terms and conditions of transmission service. Order 889 addressed transmission system information transparency and standards of conduct applicable to utilities with transmission and generation functions.

[3] There were a number of FERC Orders and rulings following the publication of and comment period for the original "Notice Of Proposed Rulemaking on an Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities". These included the original Order 888 published on April 24, 1996, and rulings on rehearing published March 4, 1997 (Order 888-A), November 25, 1997 (Order 888-B), and January 20, 1998 (Order 888-C). The companion Order 889 (on OASIS and Standards of Conduct) was also published on April 24, 1996, with rehearing Orders published on March 4, 1997 (889-A) and November 25, 1997 (Order 889-B). FERC also issued subsequent Orders on OASIS Standards and Communications Protocols.

The FERC Orders address a wide-ranging array of issues associated with access to electric power transmission systems. However, at its core the intent is clear: to "remedy undue discrimination in access to the monopoly owned transmission wires that control whether and to whom electricity can be transported [in the Maritimes and New England region]".[4]

Q. WHAT ARE THE PRIMARY CONCERNS THAT GIVE CAUSE TO A NEED TO CREATE AN OATT?

A. When there is no independent transmission system operator, an explicit set of non-discriminatory provisions must be in place to prevent an incumbent from putting in place discriminatory access rules that favor its own generation and load. In regions with independent system operators, such as seen in New Brunswick, Ontario and Alberta, and in RTOs in the US, tariff structures that may differ from the FERC 888 *pro forma* help provide non-discriminatory protections.

Q. WHY DOES NOVA SCOTIA NEED AN OATT?

[4] FERC Order 888, introductory paragraph.

A. New Brunswick's tariff contains a reciprocity provision which effectively requires Nova Scotia Power to have in place an open access tariff as a condition of access to their grid. Without such permission, all NSPI transactions between Nova Scotia and New Brunswick would settle "at the border". With permission to use New Brunswick's grid, NSPI is not limited to selling and buying only at the border. The FERC 888 *pro forma* tariff template has been used to create the open access environment for transmission users in New Brunswick, and can be used to do the same in Nova Scotia. Also, the Province's Energy Strategy described establishment of an OATT.[5]

Q. DOES NSPI CURRENTLY HAVE ACCESS TO NB'S GRID?

[5] Nova Scotia Energy Strategy, *Seizing the Opportunity*, Vol. 2, Part III, Electricity, page 15.

A. Yes. However, it must have in place an open access tariff by November 1, 2005 in order to retain permission to sell and buy at locations other than the NS-NB border.[6]

Q. DOES NSPI NEED A FERC *PRO FORMA* 888 TARIFF IN ORDER TO OPEN THE MARKET TO COMPETITION IN NOVA SCOTIA?

A. No. However, obtaining reciprocal access over the New Brunswick system can only help to access potential generation resources in Quebec and New England, the directly connected regions beyond New Brunswick's borders.

[6] NSPI response to UARB-Synapse IR-16. The New Brunswick System Operator "[does] not oppose the current NSPI request" for an extension of the reciprocity provision waiver, and "will support any directive from the New Brunswick Board to revise the waiver deadline" to Nov. 1, 2005. They do not support any further extension.

Application to Canadian Entities

Q. PLEASE EXPLAIN WHY A NUMBER OF CANADIAN PROVINCES CREATED FERC 888 *PRO FORMA* TARIFF STRUCTURES EVEN THOUGH FERC DOES NOT HAVE JURISDICTION IN CANADA.

A. The purpose of creating FERC-compliant OATT's in Canadian provinces was to secure Canadian transmission-owning affiliate companies' ability to sell power in the US at market-based rates, rather than being restricted to selling surplus output at the border. For example, several Canadian utilities have historically sold energy into US jurisdictions. Limiting transactions to border sales would deprive the utilities in these regions of additional revenue.

Q. WHAT ARE THE MOST SALIENT ASPECTS OF THE FERC ORDERS ADDRESSING CANADIAN OATT'S?

A. FERC has been clear in its rulings granting market-based rate authority to Canadian-based companies with transmission systems and 888 *pro forma* OATTs. Primarily, FERC is not concerned with the rates, terms and conditions of transmission access for Canadian load, but rather with the way in which power marketing or generation competitors to Canadian transmission-owning affiliates are allowed access through Canadian systems to serve load in the US. In a pair of seminal rulings in 1995 and 1996, in respect of applications for market-based rate authority, FERC said the following in respect of mitigation of transmission market power in the Canadian jurisdictions of Quebec and Alberta:
Quebec (Energy Alliance Partnership application for market-based rates):

"...The fact that these transmission facilities are located in Canada does not diminish the possibility that Energy Alliance's competitors may require transmission service from Hydro-Quebec to reach United States markets. The Commission's concern is not transmission service to serve Canadian loads -- it is transmission to serve United States loads. Entities may wish to locate in Canada, but sell to United States

utilities, or entities may wish to market Canadian power in the United States, and they may require Hydro Quebec's transmission service in order to do so."[7]

Alberta (TransAlta Enterprises Corporation application for market-based rates):

"To demonstrate the requisite absence or mitigation of transmission market power, the Commission normally requires a power marketer to show that a transmission-owning utility affiliate has on file with the Commission an open access transmission tariff for the provision of comparable services. Here, however, TransAlta's transmission-owning utility affiliate operates in foreign (Canadian) commerce. As such, we have no direct authority to require Utilities, over which we do not have jurisdiction, to file an open access tariff.

In Energy Alliance, we held that we are amenable to a variety of approaches to deal with the market power of foreign utility affiliates of United States marketers. We determined that the marketer must be able to demonstrate that its transmission-owning utility affiliate offers non-discriminatory access to its transmission system that can be used by competitors of the power marketer to reach United States markets.

...

[7] See FERC Order in Docket ER95-1491-000, October 3, 1995, page 6.

These arrangements [Alberta independent GridCo and power pool] are sufficient for a foreign utility affiliate of a United States marketer to address the market power concerns raised by the Commission in Energy Alliance, supra, and to meet the general principles of transmission comparability in Order No. 888. All potential users of the Alberta transmission system (affiliated or not) are subject to the same rates, terms and conditions and have access to the Alberta system to reach loads in the United States. Indeed, TransAlta's application does not indicate any limitation on the ability of power sellers in the United States to use the Alberta pool and transmission grid to reach potential markets in Canada. We view the expansive scope of the Alberta arrangements, allowing for power sales from Canada into the United States and vice versa, as a positive factor in our assessment of TransAlta's application for market-based rates."[8]

[8] See FERC Order in Docket ER96-1316-000, June 12, 1996, pages 3-4.

IV. Scope of Issues Addressed

Q. WHAT IS THE SCOPE OF WORK ADDRESSED IN YOUR TESTIMONY?

A. I address the following areas concerning NSPI's proposed OATT and Standard Generation Interconnection Procedures:

- General Comparison to Canadian and US OATTs;
- FERC Compliance;
- Comparability with New Brunswick Power Tariff;
- Appropriateness of Proposed Standard Generation Interconnection Procedures;
- Appropriateness of Method of Computing TTC and ATC;
- Appropriateness of Proposed OASIS;
- Appropriateness of NSPI Tariff Rate Computations in Comparison to Industry Use, Including Ancillary Services; and

These areas are addressed in turn below.

General Comparison to Canadian and US OATTs

Q. WHAT OTHER CANADIAN TRANSMISSION SYSTEMS HAVE OPEN ACCESS TRANSMISSION TARIFFS?

A. Ontario and Alberta have OATTs that do not conform to FERC's *pro forma* tariff but have been accepted by FERC to be equivalent or superior to its *pro forma* tariff and thus serve to provide non-discriminatory transmission access. British Columbia, Manitoba, Saskatchewan, Quebec and New Brunswick have FERC 888 *pro forma* OATTs.

Q. HOW DO THOSE TARIFFS, AND OTHER US OATTS, COMPARE WITH NSPI'S PROPOSED OATT?

A. Generally the form of the five Canadian *pro forma* tariffs is similar to the form proposed by NSPI, which is similar to US *pro forma* tariffs. The form of tariff in Ontario and Alberta is different, but each meets or exceeds FERC's minimum requirements for open access non-discriminatory transmission service.

Q. HOW IS NSPI'S TARIFF DIFFERENT FROM THE TARIFF IN PLACE IN ALBERTA AND ONTARIO?

A. Alberta and Ontario's tariff structure reflects the presence of an independent system operator, and a single transmission tariff for all users of the transmission system. All users take transmission service under one tariff. While the rate terms and the structure of these tariffs don't necessarily meet

with the approval of all market participants, it is undisputable that they provide non-discriminatory service.

Q. ARE THERE ANY CONDITIONS IN THE NSPI OATT THAT ARE SUBSTANTIALLY DIFFERENT FROM CONDITIONS IN OTHER CANADIAN OATTS?

A. Yes. I have identified two notable areas of difference.

First, the imbalance energy provisions in NSPI's proposal contain the additional provisions that 1) deviations will be settled separately for load and generation; and 2) non-dispatchable energy will be settled hourly. These provisions are not present in any of the other Canadian OATTs.

Second, NSPI's proposed tariff and New Brunswick's existing tariff do not use FERC's Load Ratio Share rate method, which are used in the other Canadian *pro forma* OATT's.

Q. HAS FERC INDICATED THAT THE CANADIAN OATTS, EXCEPTING NEW BRUNSWICK AND MANITOBA, PROVIDE NON-DISCRIMINATORY SERVICE?

A. Yes. FERC initially approved market-based rate authority for an Alberta power marketer based on the presence of a tariff that met or exceeded FERC 888 *pro forma* tariff standards.[9] FERC approved the market-based rate authority for an affiliate of Ontario Hydro after the establishment of an

[9] TransAlta Enterprises Corporation, Docket No. ER96-1316-000, June 12, 1996.

independent system operation in Ontario.[10] FERC has indicated its acceptance of the OATTs in British Columbia, Saskatchewan and Quebec.

Q. HAS FERC INDICATED ACCEPTANCE OF THE OATTS IN PLACE IN NEW BRUNSWICK AND MANITOBA?

A. No. There have not been any filings to FERC which required FERC to accept either of these OATT's as proof of availability of non-discriminatory transmission access in these regions.

Q. ARE THERE ANY CONDITIONS IN THE NSPI OATT THAT ARE SUBSTANTIALLY DIFFERENT FROM CONDITIONS IN US OATTS?

A. Yes. I address these in the next section, where I examine the NSPI OATT proposal from a FERC-compliance perspective.

Q. SHOULD THE BOARD CONSIDER WHETHER OR NOT NSPI'S PROPOSED OATT IS FERC COMPLIANT?

[10] 78 FERC 62,529.

A. Yes. Examining the tariff to determine if it would be FERC compliant provides a benchmark for the Board to consider when evaluating the extent of non-discriminatory access provided under NSPI's proposed OATT. Since NSPI is not applying to FERC for market-based rate authority, there is no US-based requirement that it be FERC compliant. The extent to which it is FERC compliant would likely be a consideration that the New Brunswick Board takes into account when it determines if NSPI's tariff meets the reciprocity provisions of the New Brunswick system OATT.[11]

[11] New Brunswick Board of Commissioners of Public Utilities, *Decision: In the Matter of an Application dated June 21, 2002 by New Brunswick Power Corporation in connection with an Open Access Transmission Tariff*, in the section on Reciprocity the Board states: "...the transmission customer or its corporate affiliate commit to the implementation of an open access transmission tariff that would be compatible with FERC Order 888 and delivered through an Open Access Same-Time Information System (OASIS) system by January 1, 2004."

FERC Compliance

Q. WHAT ISSUES DID YOU EXAMINE TO DETERMINE THE EXTENT TO WHICH NSPI'S OATT IS FERC COMPLIANT?

A. I examined a number of issues addressed in FERC Order 888, 888-A and 888-B and relevant to the primary intent of the Orders. In accordance with the Orders, an OATT must offer transmission service to third parties at rates, terms and conditions that are comparable to the service the utility provides itself to serve native load or wholesale requirements contracts. This is the fundamental tenet of non-discriminatory transmission access. In accordance with Order 889, the transmission provider must make transparent relevant transmission system information and prevent preferential access to such transmission system information by the utility's own wholesale merchant arm. In accordance with these principles, and reflecting the areas of interest expressed by the parties present at the technical conference held in Halifax in March, I examined seven areas: the five bulleted below, plus two others in separate sections.

- Unbundling requirements;
- Price comparability, cost allocation and rate design issues associated with OATT service and bundled native load service for transmission and ancillary services;
- Load Ratio Share (LRS) vs. Non-Coincident Peak (NCP) charge determinant;
- Energy imbalance provisions and non-dispatchable generation; and
- Stranded Costs.

In the separate sections I review NSPI's proposed Generation Interconnection Standards and make recommendations to ensure

compatibility with current and proposed industry standards; and I address OASIS issues associated with FERC Order 889.

Q. ARE THERE OTHER ASPECTS OF FERC COMPLIANCE BEYOND THESE SEVEN ISSUE AREAS?

A. Yes. The FERC *pro forma* tariff contains numerous provisions which are required for compliance. Generally, it appears these other provisions have been met by NSPI's use of the *pro forma* tariff structure.

Unbundling

Q. TO WHAT EXTENT DOES A FERC-COMPLIANT TARIFF REQUIRE UNBUNDLING OF TRANSMISSION RATES?

A. FERC requires functional unbundling of wholesale transmission service. FERC does not require unbundling of retail transmission service.[12]

Q. DOES FERC REQUIRE UNBUNDLING OF THE TRANSMISSION SERVICE EMBEDDED IN THE PROVISION OF BUNDLED SERVICE TO NATIVE LOAD?

[12] FERC Order 888-A, page 186, "We conclude that the additional step of functionally unbundling the distribution function from the transmission function is not necessary at this time to ensure non-discriminatory open access transmission. Our approach to assuring such open access has two broad requirements: (1) functional unbundling of transmission and generation (which includes separately stated rates for generation, transmission, and ancillary services, and a requirement that a transmission provider take service under its own tariff), except for bundled retail service and (2) an OASIS with standards of conduct. We believe that additional requirements are not needed now."

A. No. However, FERC does expect comparable pricing between transmission service provided to native load and that made available through an OATT. FERC required informational filings by utilities to illustrate the rates and terms of transmission service for bundled load[13].

Q. HAS NSPI MET FERC MINIMUM STANDARDS FOR UNBUNDLING?

A. Yes.

Price Comparability, Cost Allocation and Rate Design

Q. DOES A FERC-COMPLIANT TARIFF REQUIRE COMPARABLE PRICING BETWEEN SUCH BUNDLED SERVICE AND OATT TRANSMISSION SERVICE?

A. Yes. FERC addresses the extent of price comparability on a case-by-case basis.

Q. WHAT IS COMPARABLE PRICING?

A. Comparable pricing implies similar rates for similar service. FERC's "golden rule of pricing" stated that "a transmission owner should charge itself on the

[13] FERC Order 888, page 89-90: "Finally, with respect to all existing requirements contracts and tariffs that provide for bundled rates, we will require all public utilities to make informational filings setting forth the unbundled power and transmission rates reflected in those contracts and tariffs. These informational rates must be submitted to the Commission within 60 days of publication of the Final Rule in the Federal Register and must also be included as a line item on all bills submitted to wholesale customers in the third month following the effective date of this final rule. The unbundled informational rates will permit wholesale customers to compare rates in anticipation of their contracts expiring so that they can evaluate alternative contracts."

same or comparable basis that it charges others for the same service".[14] Thus, customers taking bundled electricity from NSPI should effectively pay similar rates for transmission and ancillary services compared to the rates paid by OATT customers.

Q. DOES NSPI'S OATT REFLECT COMPARABLE PRICING FOR TRANSMISSION SERVICE?

A. It does reflect comparable pricing for point-to-point service, since NSPI would use the OATT for this service, as would third-party users. However, the OATT does not reflect comparable pricing for network service. The use of a different cost allocation method for determining the network transmission service requirement for OATT customers compared to that used to allocate transmission costs for bundled service customers leads me to the conclusion that the transmission pricing is not comparable.

Q. WHAT COST ALLOCATION METHOD IS USED FOR NETWORK SERVICE FOR OATT CUSTOMERS?

[14] FERC Policy Statement on the pricing of transmission services, Docket RM93-19-000, October 26, 1994, page 18.

A. NSPI has used a 12CP mechanism to allocate the revenue requirements between network and point-to-point uses of the transmission system.[15] NSPI then uses the network allocation in combination with non-coincident peak load to determine the OATT network service rate.[16]

Q. WHAT COST ALLOCATION METHOD IS USED FOR BUNDLED SERVICE CUSTOMERS?

A. While NSPI did not provide in its application any direct comparison between the cost allocation mechanism used for native load and that used to compute the OATT pricing, I understand that transmission costs for NSPI bundled retail customers are allocated on the basis of energy (approximately two-thirds of the revenue requirement) and demand (one-third of the revenue requirement). The demand component is further allocated on the basis of the average of the three coincident peaks of the winter months.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that the derivation of the OATT transmission rates follow the same cost allocation process NSPI has used for bundled service customers.

Q. DOES NSPI'S OATT REFLECT COMPARABLE PRICING FOR ANCILLARY SERVICES?

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[15] Evidence, Figures 5-4 and 5-5, pages 50-51.

[16] Ibid., Figure 5-7, page 57.

A. No. The ancillary services provided to OATT customers are based on a "proxy" cost method, whereby the projected costs to provide ancillary services depend on the cost of a new "proxy" generation unit. The ancillary services provided to bundled service customers reflect embedded cost rates.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that a common pricing methodology be used for bundled service and OATT service. While OATT service customers could in theory provide their own ancillary services (for all but two of the ancillary services), those who do not or cannot choose to self-supply will rely upon the ancillary service offerings of NSPI. For this reason, prices must be comparable.

The common method should be based on embedded cost, since the absence of unbundled retail components and the relatively small scope of market opening suggests that NSPI will continue to provide the bulk of ancillary services. As a regulated entity providing the bulk of these services, an embedded cost-based approach is reasonable.

Load Ratio Share (LRS) vs. Non-Coincident Peak (NCP) Charge Determinant

Q. IS NSPI'S PROPOSED USE OF NCP INSTEAD OF LRS REASONABLE?

A. Yes. The FERC *pro forma* uses a 12CP LRS method. However, FERC indicated that transmission systems that don't necessarily plan their systems on a peak use basis could offer alternative rate design options on a case-by-case basis. NSP has indicated its system use is somewhat different, as flows

on the “backbone” transmission system do not vary in direct proportion to peak load.[17]

Energy Imbalance

Q. WHAT ARE YOUR CONCERNS WITH NSP'S PROPOSED ENERGY IMBALANCE SERVICE?

A. I have two concerns. First, NSPI has proposed separate treatment for load and generation deviations from schedule, contrary to FERC Order 888-A. Second, NSPI has proposed different imbalance energy price treatment for non-dispatchable resources compared to dispatchable resources. I address each of these below.

Q. HOW DOES FERC ORDER 888-A AND THE PRO FORMA TARIFF ADDRESS IMBALANCE ENERGY ISSUES?

A. The *pro forma* tariff and Order 888-A address bandwidth for deviations, and pricing.

FERC acknowledged an industry standard use of +/-1.5%, and allowed for smaller minimums (e.g., +/- 1 MW) for smaller customers. FERC also stated that imbalances should be eliminated within a 30-day window.

FERC did not set a pricing policy for the treatment of imbalance energy. Rather, it indicated such pricing treatment be addressed on a case-by-case basis.

[17] March 24, 2005 technical, response to IR-5.

As with all transmission and ancillary services, FERC does require comparable pricing among users of the service.

Q. HAS NSPI INCLUDED ENERGY IMBALANCE PROVISIONS THAT ARE NOT PRESENT IN THE *PRO FORMA* TARIFF?

A. Yes. NSPI includes a statement in its proposed Energy Imbalance Schedule 4 that the service "will be applied separately to deviations from load schedules and deviations from generation schedules".[18] This sentence does not appear in FERC's *pro forma* tariff. NSPI also includes a separate provision in its Schedule 4 pertaining to "Non-Dispatchable" generators, proposing that such generators' deviations will be settled on an hourly basis. Other generators' deviations will be settled on a billing month basis.

Q. WHAT IS THE EFFECT OF INCLUDING THESE PROVISIONS?

A. Users of the OATT would have to balance both generation and load components separately, rather than netting the impact of a given schedule deviation.

Non-dispatchable generation would be treated differently than dispatchable generators, who can balance schedule deviations within a 30 day billing period, separately for peak and off-peak periods.

Q. ARE THE ENERGY IMBALANCE PROVISIONS OF NSPI'S OATT FERC COMPLIANT?

[18] Revision to Application, Exhibit 1, Schedule 4, page 1 (revised February 2005).

A. No. The inclusion of a provision calling for separate schedule balancing between load and generation would be at odds with the energy imbalance service NSPI effectively provides itself, which is based on net deviations.

Additionally, the energy imbalance provisions would not provide comparable pricing between certain types of transmission service customers, namely those relying on "non-dispatchable" generation for some portion of their energy needs, and those relying solely on dispatchable generation. Deviations from a schedule using dispatchable generation are settled within a billing month, separately for peak and off-peak periods. In contrast, non-dispatchable generation is settled hourly.

Q. WHAT IS NSPI'S PROPOSAL FOR PRICING IMBALANCE ENERGY?

A. NSPI is proposing to settle imbalance energy that falls within the deviation bandwidth by selling energy at 110% of average system marginal costs when an OATT schedule is short, and purchasing excess OATT schedule energy at 90% of average system marginal cost, both differentiated by peak and off-peak periods.

For imbalance energy outside of the bandwidth, NSPI proposes selling at 150% of average system marginal cost; purchases outside the bandwidth would be made at 90% of average system marginal cost.

For non-dispatchable generators, NSPI proposes to settle imbalances on an hourly basis, using the same 110% and 90% factors as described above.

Q. DOES NSPI STATE WHY THEY PROPOSE THE FORM OF IMBALANCE ENERGY SERVICE FOR NON-DISPATCHABLE GENERATORS?

A. Yes. They state: "The 10% adjustment to marginal cost is intended to compensate NSPI for transaction costs."[19]

Q. DOES NSPI EXPLAIN WHY TRANSACTION COSTS ARE SUCH THAT A 10% ADDER IS REQUIRED TO FAIRLY COMPENSATE NSPI?

A. No. No evidence is provided to support the 10% adder.

Q. ARE THE PRICING ASPECTS OF NSP'S ENERGY IMBALANCE SERVICE PROPOSAL REASONABLE?

A. No. The net operational effect of imbalances on a transmission system is handled through short-term regulation, load following, and operating reserve resource response. To the extent net imbalances cause a need for greater regulating or operating reserve response, and truly result in increased short-term marginal costs, the imbalance charge could reflect this; but there has been no showing by NSPI that this is the case.[20] A more reasonable metric would be for imbalances to be settled on a marginal cost basis. This could be either an hourly marginal cost basis – which is most efficient economically –

[19] Application, page 79, lines 23-24.

[20] If there is an operational impact of increased non-dispatchable generation on the system in the day-ahead time frame, in particular with unit commitment decisions, then any separate considerations for non-dispatchable generation should reflect the costs (or benefits) associated with system operations in this timeframe, rather than the hourly operations timeframe embodied by energy imbalance provision.

or on a monthly, peak and off-peak period basis, which could roughly reflect the average marginal costs imposed by imbalance energy provision.

Q. WHAT IS THE NET IMPACT OF NSPI'S IMBALANCE ENERGY PRICING PROPOSAL?

A. The imbalance energy provisions effectively increase barriers to entry for new generation, and they also are discriminatory pricing. Bundled service customers do not see such imbalance energy pricing.

Q. WHAT ARE YOUR RECOMMENDATIONS?

A. In order for the proposed OATT to be FERC compliant, the energy imbalance provisions must provide comparable pricing across users of the system. At a minimum, imbalance energy should be settled on net deviations, and not separately settled for load and generation; and treatment afforded non-dispatchable generation serving load should not be different than treatment afforded dispatchable generation serving load.

In addition, the pricing provisions should be reviewed carefully to ascertain is there is any cost basis to justify the adders proposed by NSPI. At this time, there has been no evidence put forward to support the adders.

Stranded Costs

Q. IS A SYSTEM FOR STRANDED COST RECOVERY NECESSARY FOR THE ESTABLISHMENT OF AN OATT?

A. No. The OATT application is severable from any processes required to determine if stranded costs exist, and if so how they should be recovered.

Q. NSPI STATES THAT FERC HAS APPROVED EXIT FEES.[21] DID FERC ALLOW FOR THE RECOVERY OF STRANDED COSTS?

[21] Supplementary Evidence, page 3.

A. Yes. However, any actual recovery through NSPI tariff rates should presuppose the existence of such costs, which has yet to be demonstrated by NSPI. FERC clearly indicated that utilities should be "given the opportunity to seek recovery of legitimate, prudent and verifiable stranded costs".[22] However, they also stated that recovery is not guaranteed:

"Third, Order No. 888 does not guarantee that a utility will be allowed to recover stranded costs. Rather, it provides an opportunity for such recovery. To be eligible to recover stranded costs from a departing customer in a particular case, the utility must demonstrate that it incurred costs to provide service to the customer based on a reasonable expectation of continuing service to that customer beyond the contract term."[23]

FERC also indicated that normal business risks don't necessarily rise to the level of stranded costs:

"For example, the Rule is not intended to apply to costs associated with the normal risks of competition, such as self-generation, cogeneration, or loss of load, that do not arise from the new, accelerated availability of Commission-required transmission access. If a customer leaves its utility supplier by exercising options that could have been undertaken prior to mandatory transmission under Order No. 888 or the Energy Policy Act, or that do not rely on access to the former seller's transmission, there is no direct nexus to Commission-required transmission access and thus no opportunity for stranded cost recovery under the Rule."[24]

And:

[22] For example, "The stranded costs must be prudently incurred, legitimate and verifiable, as provided in Section IV.J." Order 888, page 86.

[23] FERC Order 888-A, Part 2, Page 192-194.

[24] Ibid.

"It is important to note, however, that while the stranded cost recovery provisions of the Rule are based on the implicit obligation to serve, the Rule does not guarantee any extra-contractual wholesale stranded cost recovery, much less across-the-board recovery of such costs by all public utilities. To the contrary, it provides an opportunity for such recovery only for a discrete set of requirements contracts (those executed on or before July 11, 1994 that do not contain an exit fee or other explicit stranded cost provision), and the Rule requires that a utility must meet a heavy burden of proving eligibility to recover costs in a particular case: before a departing customer is required to pay a stranded cost exit fee or transmission surcharge, the utility must demonstrate that it incurred costs to provide service to a customer based on a reasonable expectation of continuing service to that customer beyond the end of the contract."[25]

Q. HOW DOES THE FERC *PRO FORMA* TARIFF ADDRESS THE RECOVERY OF STRANDED COSTS?

A. The FERC *pro forma* tariff includes a section that states:

> "Stranded Cost Recovery: The Transmission Provider may seek to recover stranded costs from the Network Customer pursuant to this Tariff in accordance with the terms, conditions and procedures set forth in FERC Order No. 888. However, the Transmission Provider must separately file any proposal to recover stranded costs under Section 205 of the Federal Power Act."[26]

NSPI has included supplemental evidence describing a stranded cost recovery provisions even though they included the FERC pro forma language in their OATT, indicating that NSPI "must separately file any proposal to recover stranded costs with the Board".[27]

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[25] Ibid.

[26] FERC *pro forma* tariff, section 34.5.

[27] Application, Exhibit 1, page 70 lines 3-4.

Compatibility with New Brunswick Power Tariff

Q. IS NSPI'S OATT COMPATIBLE WITH NEW BRUNSWICK'S OATT?

A. In most respects it is compatible. In particular, the reciprocity provisions of New Brunswick's tariff effectively state that NSPI would need to provide comparable transmission service on similar terms and conditions as those present in the New Brunswick tariff. If the underlying concerns I have noted in this testimony are addressed by NSPI, then the resulting NSPI OATT would provide comparable service to that offered under the New Brunswick tariff and thus the reciprocity provision would be met.

Q. DO YOU HAVE ANY PARTICULAR AREAS OF CONCERN?

A. Yes. The energy imbalance provisions in NSPI's proposed OATT are different from those in the New Brunswick tariff. New Brunswick does not separate load from generation in its application of the energy imbalance service; and New Brunswick does not have provisions that apply separately to non-dispatchable generation.

Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF PROPOSED CHANGES TO NEW BRUNSWICK'S ENERGY IMBALANCE SERVICE PROVISIONS.

A. I understand that New Brunswick is considering an imbalance energy service that would settle based on an hourly marginal cost metric, rather than the rates currently used.

Q. WOULD YOU SUPPORT A SIMILAR CHANGE IN ENERGY IMBALANCE SERVICE PROVISION IN NOVA SCOTIA?

A. Yes. Absent evidence to the contrary, settling imbalances on hourly marginal cost is an economically efficient means to address imbalance energy. Adders to hourly marginal cost might be appropriate only if it can be shown that absence of such a structure is likely to lead to incremental hourly costs on system operations.

Q. WHAT ARE YOUR RECOMMENDATIONS TO ENSURE ACCEPTANCE OF THE NSPI OATT AS PROVIDING COMPARABLE SERVICE TO THAT OFFERED BY THE NEW BRUNSWICK TARIFF?

A. My primary recommendations are the same as I set out in my earlier section on FERC compliance concerning energy imbalance provisions: at a minimum, I recommend that the energy imbalance provisions in NSPI's proposed tariff be changed to allow for settlement on net deviations, rather than separately for load and generation deviations; and that non-dispatchable generation imbalance settlement be treated in the same manner as settlement for dispatchable generation.

I further recommend that NSPI consider using hourly marginal cost as the most appropriate metric on which to settle imbalance energy.

Appropriateness of Proposed Standard Generation Interconnection Procedures

Q. WHAT ISSUES ARE YOU ADDRESSING IN THIS SECTION OF YOUR TESTIMONY?

A. I address two issues related to NSPI's Standard Generator Interconnection Procedures ("GIP") and the accompanying Standard Generator Interconnection and Operating Agreement ("GIA").

First, I describe an important difference between a certain element of NSPI's application and the comparable element in FERC's Standard Generator Interconnection Agreement concerning cost responsibility for network upgrades needed to interconnect new generation. I recommend NSPI's GIA be changed to reflect the intent in FERC's original determinations, which is that those transmission customers who pay for network upgrades receive 100% cost recovery.

Second, I discuss appropriate measures to ensure reasonable interconnection treatment for small generators. I recommend minor modification to NSPI's policies and codification of those policies to ensure transparency and non-discriminatory treatment for any new generator seeking grid connection.

Standard Generation Interconnection Procedures

Q. DO NSPI'S PROPOSED STANDARD GENERATOR INTERCONNECTION PROCEDURES AND RELATED APPENDICES MEET THE FORM AND

SUBSTANCE OF FERC'S PROCEDURES AND APPENDICES AS REFLECTED IN FERC ORDERS 2003, 2003-A AND 2003-B?

A. In most respects they do. However, there is one area in which NSPI's proposed GIA does not meet FERC's standards: an issue pertaining to credits to transmission customers who install network upgrades in order to connect their generation to the transmission grid.

Q. PLEASE EXPLAIN HOW NSPI'S APPLICATION ADDRESSES THIS ISSUE.

A. NSPI revised section 11.4.1 of FERC's Standard Generator Interconnection and Operating Agreement, replacing the text of the FERC-approved GIA with a one sentence assertion by NSPI that NSPI would "determine any applicable refunds associated with the Interconnection Customer's contribution to Network Upgrades."[28]

Q. WHAT DOES THE FERC-APPROVED GIA SAY IN THIS REGARD?

A. The FERC-approved GIA states that the interconnecting customer who pays for network upgrades will be reimbursed for all network upgrade costs, either in cash or in credits given to the customer for transmission service taken for delivery of energy or capacity from the interconnected generator. These payments will include the interest on the customer's funding of the network upgrade, and they must be paid in full within 20 years of the upgrade.

[28] Exhibit 2, Appendix 6, page 64.

Q. HOW DID THIS PROVISION COME ABOUT AND WHAT WOULD BE ITS EFFECT IN NOVA SCOTIA?

A. This provision was a heavily-discussed element of FERC's Standard Generation Interconnection Procedures. It stems from FERC's earlier "Pricing Policy Statement"[29] that sought to prevent "And" pricing, or the payment by a customer of both average and incremental transmission costs. FERC determined this policy was in violation if a customer paid for network upgrades while they also paid average costs for transmission service. Thus, in the final Order 2003 (and re-affirmed, with minor modifications, in the rehearing Orders 2003-A and 2003-B) FERC established this crediting mechanism to effectively prevent overpayment by a transmission customer connecting a generator to the grid, and to ensure 100% cost recovery by those who pay for required network upgrades.

The effect of this policy in Nova Scotia would be to ensure that any required network transmission upgrades financed by the connecting customer are effectively fully "rolled in" over a long period through credits given to the financier, i.e. the connecting customer.[30] The policy would guarantee 100% recovery of these network upgrade costs.

Q. WHAT DO YOU RECOMMEND FOR STANDARD GENERATOR INTECONNECTION POLICY?

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[29] FERC Transmission Pricing Policy Statement, Docket No. RM93-19-000, October 26, 1994.

[30] The connecting customer facing network upgrade cost responsibility is often initially a generator. Generators per se don't usually pay network transmission costs, but rather load being served from the generator pays

A. I recommend that the Standard Generation Interconnection and Operating Agreement proposed by NSPI be modified to include the original intent of FERC's Order 2003, as affirmed in Orders 2003-A and 2003-B.

Small Generator Procedures

Q. DO NSPI'S STANDARD GENERATION INTERCONNECTION PROCEDURES ADDRESS SMALL GENERATORS?

for transmission service as a network or point-to-point customer, or as part of native load service.

A. No, not directly. NSPI indicated in an information response[31] that it has a separate policy for small generators; and its SGIPs effect only generation connected at transmission voltage levels, i.e. at the 69 kV level and above.

Q. DOES FERC HAVE A FORMAL SMALL GENERATOR INTERCONNECTION PROCEDURE STANDARD?

q. No. However, FERC did issue a Notice of Proposed Rulemaking for "Standardization of Small Generator Interconnection Agreements and Procedures" (SGIA and SGIP) on the same day as its issuance of Order 2003 for larger generators. Discussion and progress towards a final rule in that docket is ongoing. FERC also issued on January 24, 2005 an additional related Notice of Proposed Rulemaking, on Standard Interconnection Agreements for Wind Energy and Other Alternative Technologies.

Q. DOES NSPI'S POLICY FOR SMALL GENERATORS ALIGN WITH FERC'S PROPOSED SGIP AND SGIA?

Q. Not entirely. NSPI uses a 69 kV voltage threshold to determine if a generator must use its proposed Standard Generator Interconnection Procedure. FERC's proposed Small GIP included a definition of a small generator as one below 20 MW. NSPI does not use the 20 MW threshold to determine if a generator needs to use NSPI's GIP and GIA. However, FERC did recognize that an alternative standard, such as the 69 kV voltage threshold, could also be a basis to differentiate small generators from large generators.

[31] NSPI response to UARB-Synapse IR-40.

Q. WOULD NOVA SCOTIA BENEFIT FROM ESTABLISHING A STANDARD FOR INTERCONNECTING SMALL GENERATORS?

A. Yes. NSPI's current policies, along with potential modification to its 69 kV threshold, could help smaller generators overcome institutional barriers to grid connection. For example, there may be instances when a small generator less than 20 MW may wish to connect to the grid at 69 kV, yet its size and location would have minimal impact on the operation of the grid and it might rightly belong in a small generator category. In such circumstances, the full set of criteria established in the Standard Generation Interconnection Procedures may not be necessary, from a technical perspective.[32] In such cases, a modified set of procedures streamlining the interconnection request would be of benefit, and would serve to lower barriers to entry.

Q. WHAT DO YOU RECOMMEND FOR SMALL GENERATOR INTERCONNECTION POLICY?

A. I recommend that NSPI's current policies for interconnecting small generators be adapted to include certain small generators – e.g., less than 20 MW, but possibly even greater than 20 MW – who connect at the 69 kV grid level, when technically appropriate. I also recommend that NSPI's procedures for small generators be codified, resulting in transparent procedures and helping to ensure non-discriminatory treatment across all potential newly interconnecting generators.

[32] Conversely, there may be circumstances where a small generator connecting at 69 kV or at even lower voltages may have the potential for a significant impact on the system, and in such cases it may be reasonable to apply NSPI's standard GIP.

Appropriateness of Method of Computation of TTC and ATC

Q. ARE THE METHODS OF COMPUTATION OF TTC AND ATC APPROPRIATE?

A. Yes, it appears that the methods described by NSPI are appropriate and aligned with the standards used by the industry. The New Brunswick System Operator takes the lead in determining TTC and ATC for the Nova Scotia – New Brunswick intertie, with input from NSPI.

However, if there is a need for the establishment of TTC and ATC for any internal Nova Scotia interfaces, it would be necessary for NSPI to ensure that the final OASIS system in place properly reflects such interfaces and that the TTC and ATC is computed and posted for those interfaces in the same manner as is done for the inter-Provincial intertie.

NSPI Proposed OASIS

Q. WHAT DID NSP PROPOSED FOR AN OASIS?

A. NSPI did not propose any specific, comprehensive OASIS in its application. A fully functional OASIS would need to provide a transmission reservation system, and allow for transparency of system information similar to that available on other OASIS's throughout North America. NSPI currently does not have such functionality on its rudimentary OASIS.

NSPI has indicated it plans to proceed with either of two options to establish a FERC-compliant OASIS: 1) work with the New Brunswick System

Operator, or 2) outsource the OASIS development to a third party, likely OATI [33]. Either of these two approaches could meet FERC compliance, if undertaken properly.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that NSPI proceed with its plans to determine the best option for an OASIS development path. All else equal, it would appear sensible to work closely with the New Brunswick System Operator to determine if using an existing structure might be the most efficient and reliable means of developing a FERC-compliant OASIS for Nova Scotia.

NSPI Tariff Rate Computations: Transmission and Ancillary Services

Q. WHAT ARE YOU ADDRESSING IN THIS PART OF YOUR TESTIMONY?

A. I evaluate the appropriateness of the NSPI tariff rate computations, for transmission and for ancillary services.

Q. ARE NSPI'S TARIFF RATE COMPUTATIONS FOR TRANSMISSION SERVICE APPROPRIATE?

A. Yes. For a given revenue requirement, the computations appear reasonable and follow industry standards. However, the OATT rates would be different if

[33] Open Access Technology International, Inc.

an attempt was made to align the cost allocation methods used for service under the OATT and bundled service.

Q. PLEASE EXPLAIN.

A. Currently, any users of the OATT would face transmission charges based on a 12 CP allocation of costs. This would produce a certain revenue stream for NSPI for transmission services to these customers. Under the bundled service option, the same customers could see effective transmission charges that differ from the OATT charges, because the basis for transmission cost allocation is the current allocation method, two-thirds of which is based on energy usage, and one-third of which is based on demand using average coincident peak over the three winter months.

Q. WHAT DO YOU RECOMMEND IN RESPECT OF THE RATE COMPUTATIONS FOR TRANSMISSION SERVICES?

A. I recommend that NSP revise the rate computations to reflect comparable cost allocation methods between OATT users and bundled service load.

Q. ARE NSPI'S TARIFF RATE COMPUTATIONS FOR ANCILLARY SERVICES APPROPRIATE?

A. I am still reviewing the detailed computations provided by NSPI in Exhibit 4, the embedded costs of ancillary services. However, my initial examination indicates that some parameters may need to be updated; and NSPI's use of

certain parameters is not fully described in the Exhibit. Those parameters impact the calculation of the embedded costs of ancillary services.

For example, Table E4-2, column 9 computes the "allocation to reactive power" in the determination of Schedule 2, Reactive Supply and Voltage Control from Generation Supply Service. It contains a reference to column 3, "MVAR", but does not explain why it doesn't instead reference column 5, "Practical MVAR", in the rate determination. If NSPI were to use column 5 - instead of column 3 - when computing the allocation to reactive power, it would reduce the embedded cost for the reactive power ancillary service, therefore reducing the OATT rate if embedded cost were used for the OATT.

As another example, Table E4-4 contains the amount of regulation capacity required for load following. However, the derivation in the table is unclear, and it appears that actual load following costs might be lower than the rates and the revenue requirement contained in Figure 6-1 of the application.

The computations in Table E4-5 provide another example. The derivation uses "actual recallable sales" in the determination of the spinning reserve revenue requirement. However, NSPI projects future export sales to be very low.[34] Incorporating this projection into the Table could change the resulting embedded costs revenue requirement for spinning reserves.

Lastly, the cost of capital noted in Table E4-1 is based on a 2003 rate application. It appears that a revision to cost of capital metrics used in the Table might be appropriate.

Q. WHAT DO YOU RECOMMEND IN RESPECT OF THE RATE COMPUTATIONS FOR ANCILLARY SERVICES?

A. I recommend that the parameters used in the tables in Exhibit 4 be carefully reviewed by Board staff, NSPI, and interested intervenors to establish common ground for the allocation of embedded costs to ancillary services. Since NSPI has proposed "proxy units" to set the OATT rates, the information in Exhibit 4 may not have received the scrutiny required to establish the true embedded costs of ancillary service provision and the impact this would have on the OATT ancillary service rates.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

[34] Response to UARB-Synapse IR-20.