

OASIS Phase 2 - User Needs Survey

Sponsored by OASIS How Working Group and
NERC Security Process Support System Task Force (SPSSTF)
Facilitated by EPRI and the North American Electric Reliability Council

Attention: Transmission Customers and Providers, Control Areas, Security Coordinators, Independent System Operators, and Power Exchanges

Objective

The objective of this OASIS Phase 2 User Needs Survey is to identify “*what capabilities should the next generation of OASIS include, in order to allow you to do your job better?*”

After more than a year of experience with the current OASIS, users are in an excellent position to understand what improvements and features will be most valuable in the future. In addition, the survey explores possible new requirements to integrate electronic energy transaction scheduling and constraint management with the existing transmission reservation process. For the purpose of the survey, please consider Phase 2 OASIS as synonymous with the Market Interface of the NERC Transaction Management System (TMS).

The survey is one step toward the preparation of detailed specifications which are planned for filing with the Federal Energy Regulatory Commission in November 1998. These specifications are expected to lead to the development of a Phase 2 OASIS / Market Interface.

Scope

It is clear from the industry’s experience to date that Transmission Customers are not the only anticipated users of Phase 2 OASIS / Market Interface information. The list of users of will likely further expand as a process for electronic energy transaction scheduling is developed. In order to understand the full scope of Phase 2 OASIS / Market Interface requirements, this survey is intended to identify the information needs of the following anticipated users:

- 1) Wholesale Transmission Customers (TC) (*May include affiliated and non-affiliated power marketers, transmission dependent utilities, power producers, ancillary service suppliers, load serving entities, end consumers, and others*)
- 2) Transmission Providers (TP)
- 3) Control Area Operators (CA)
- 4) Security Coordinators (SC)
- 5) Independent System Operators (ISO)
- 6) Power Exchange Coordinators (PX)

The survey assumes the Phase 2 OASIS / Market Interface will encompass four broad functional areas. These four functional areas were described in a report filed on November 3, 1997, entitled “Industry Report to the Federal Energy Regulatory Commission on the Future of OASIS”. This report may be downloaded from the OASIS Home Page at www.tsin.com and has been posted for public comment by the Commission. The first two of these functional areas are already at least partially supported in OASIS Phase 1. The latter two functional areas are new:

- 1) **Reserving Transmission Capability (Existing)** - Transmission Customers may reserve transmission capability for the purpose of scheduling its usage at a later time.
- 2) **Arranging Ancillary Services (Existing)** - Transmission Customers may arrange for ancillary services in association with transmission service.
- 3) **Scheduling Energy Interchange Transactions (Possible New)** - Transmission Customers may schedule the flow of energy using reserved or existing transmission rights.
- 4) **Constraint Management (Possible New)** - Transmission Customers may have access to system constraints, transaction curtailments, and mitigation alternatives, in order to more efficiently schedule transmission uses and manage risk.

There are many aspects of developing a specification for Phase 2 OASIS / Market Interface. This survey solicits your input on the following:

- 1) Functional requirements (what functions does a user need to perform his/her job?)
- 2) Data requirements (what types of data are needed by the user?)
- 3) Data relationships (how is data obtained and shared among customers, providers, control areas, security coordinators, ISOs, etc.?)
- 4) Performance and response times (for human interactions as well as computer exchanges of data)
- 5) Data confidentiality (what information is sensitive and in what time horizons?)
- 6) Data security (what controls are needed to prevent unauthorized access to or modification of data?)
- 7) Interfaces to other systems (existing and new systems, specification of standard interfaces)
- 8) Graphical User Interface (should there be GUI standards; a more common look-and-feel?)

Expectations from Survey Respondents

The focus of this survey is to define Phase 2 OASIS / Market Interface requirements. While experience with the Phase 1 OASIS is important, the survey is not intended to be a vehicle for complaints about the existing OASIS design or specific implementations. The survey is meant to capture your inputs regarding capabilities that will be important to you in the future. Given that the Phase 2 OASIS / Market Interface will be implemented in 1999 or later, you are requested to project your needs during this future time frame and not simply rely on today's business model.

Structure of Survey

The survey takes the form of questions, statements, or requests for information designed to identify critical requirements for Phase 2 OASIS / Market Interface. Many questions will have an associated scale of (1-6), requiring the you to indicate strength of agreement, importance, priority, etc. Some questions may ask you to provide a brief written response of only a few words. The first section of the survey allows you to identify what type of OASIS user you are or plan to be. Based on these answers, you will be directed to other sections of the survey.

Availability of Survey Results

Results of the survey will be announced on May 18-19, 1998 at an OASIS Workshop in Danvers, MA. Results will be made public only in aggregated form. Individual survey responses will not be publicly disclosed. The results will also be posted on the OASIS Home Page at www.tsin.com prior to the workshop. Information on the OASIS Workshop may also be obtained at www.tsin.com.

Survey Instructions

Please complete the appropriate sections of the enclosed survey and return your response by April 30, 1998 to the address below.

It is preferred that each company responding provide a single consolidated response for each of the target audiences listed below. If the answers to the survey would be similar for more than one target audience, then a single response for multiple areas is preferred. For example, a company with an affiliated power marketer and serving as a transmission provider should submit one survey response as a Transmission Customer and a separate response as a Transmission Provider. A company that serves as a Control Area, Transmission Provider, and Security Coordinator may consolidate those responses into a single survey, if the answers would be consistent across all three responsibility areas.

Target Audience: (One survey response per company per area, or consolidate several areas if appropriate.)

- 1) Wholesale Transmission Customer (TC)
- 2) Transmission Provider (TP)
- 3) Control Area Operator (CA)
- 4) Security Coordinator (SC)
- 5) Independent System Operator (ISO)
- 6) Power Exchange Coordinator (PX)

Please return survey responses by April 30, 1998 to:

OASIS Survey
ENERGYPRO Services
1427 Montelegre Drive
San Jose, CA 95120

Responses may also be returned electronically by email to:
<gcauley@worldnet.att.net> and <tdevaney@worldnet.att.net>

For questions regarding the survey, please contact Terry Devaney at 408-532-7185. Some respondents may be called for more detailed information. If you feel that a telephone interview would be helpful in defining Phase 2 OASIS / Market Interface requirements, please indicate so at the end of the survey.

Proceed to the next page to start the survey.

Section 1 – Tell Us About Yourself

<i>Question</i>	<i>Fill in response</i>
1. a. Your name	a. _____
b. Your job title or brief description.	b. _____
c. Your organization name	c. _____
d. Your phone number	d. _____
e. Your email address	e. _____
2. For which responsibility area(s) are you responding?:	<i>Circle 'Yes' for all that apply.</i>
a. Transmission Customer	a. Yes (complete Sections 2 and 8)
b. Transmission Provider (OASIS Node: _____)	b. Yes (complete Sections 3 and 8)
c. Control Area	c. Yes (complete Sections 4 and 8)
d. Security Coordinator	d. Yes (complete Sections 5 and 8)
e. Independent System Operator	e. Yes (complete Sections 6 and 8)
f. Power Exchange	f. Yes (complete Sections 7 and 8)
g. Other: (_____)	g. Yes (complete appropriate sections)

Remember - you are answering the survey from your organization’s perspective. The responses that you provide will remain confidential. Only aggregated results will be made public.

Turn to the appropriate section and proceed. All respondents should complete Section 8.

Section 2 – Transmission Customer

<u>Section 2a Questions – Transmission Reservations</u>	<u>Response/Ranking</u>
1. What is the number of OASIS reservation requests <u>of all types</u> that your organization submits <i>now</i> and <i>expects to submit in 2-3 years</i> : <ul style="list-style-type: none"> a. <u>Peak</u> number of reservations submitted in any one hour? b. <u>Peak</u> number of reservations submitted in any one day? c. <u>Peak</u> number of reservations submitted in any one week? d. <u>Peak</u> number of reservations submitted in any one month? e. <u>Average</u> number of reservations submitted per month. 	Now / in 2-3 Years a. _____/_____ b. _____/_____ c. _____/_____ d. _____/_____ e. _____/_____
2. For each type service, how many reservations does your organization make <i>now</i> or <i>expect to make in 2-3 years</i> on a <u>per month average</u> ? <ul style="list-style-type: none"> a. Hourly service b. Daily service c. Weekly service d. Monthly service e. Yearly service 	Now / in 2-3 Years a. _____/_____ b. _____/_____ c. _____/_____ d. _____/_____ e. _____/_____
3. What percentage of your organization’s transmission reservations are made (<i>be sure the answers add to 100% in each column</i>): <ul style="list-style-type: none"> a. More than one year before the start time? b. Between one month and one year before the start time? c. Between one week and one month before the start time? d. More than one day and less than one week before the start? e. More than one hour and less than one day before the start? f. Less than one hour before the start time? 	Now / in 2-3 Years a. _____/_____ b. _____/_____ c. _____/_____ d. _____/_____ e. _____/_____ f. _____/_____
4. What percentage of your reservation requests does your organization make through (<i>be sure the answers add to 100% in each column</i>): <ul style="list-style-type: none"> a. The Internet GUI interface (Web Browser)? b. Computer-to-computer data exchanges? c. A value-added service provider? d. Other (e.g. phone, fax, or _____)? 	Now / in 2-3 Years a. _____/_____ b. _____/_____ c. _____/_____ d. _____/_____

<u>Section 2a Questions – Transmission Reservations</u>	<u>Response/Ranking</u>
<p>5. OASIS connections right <i>now</i> and <i>expected</i> in 2-3 years:</p> <p>a. How many Transmission Providers does your organization typically purchase transmission services from using public Internet access?</p> <p>b. How many private, dedicated OASIS connections (i.e. not through the public Internet) does your organization have with Transmission Providers?</p> <p>c. How many OASIS nodes does your organization typically conduct business on?</p> <p>d. With how many Transmission Providers does your organization routinely make reservations verbally or by fax?</p>	<p><i>Now / in 2-3 Years</i></p> <p>a. _____/_____</p> <p>b. _____/_____</p> <p>c. _____/_____</p> <p>d. _____/_____</p>
<p>6. You expect that <i>in 2-3 years</i> the OASIS process will be able to respond quickly enough for you to reserve transmission one hour or less ahead of the schedule start time, if your organization uses:</p> <p>a. Private connections</p> <p>b. The Internet</p> <p>c. Only selected OASIS nodes</p> <p>d. This statement is not true - OASIS will not work for next hour reservations.</p> <p>e. This statement is true - OASIS already works for next hour.</p>	<p><i>1 – Strongly Disagree ...</i> <i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> <p>c. N/A 1 2 3 4 5 6</p> <p>d. N/A 1 2 3 4 5 6</p> <p>e. N/A 1 2 3 4 5 6</p>
<p>7. Your expectation is that <i>in 2-3 years</i>, the overall transmission reservation process starting from the initial request, including review and approval by the Provider, and ending with confirmation by the Customer, must be how long for each type of service?:</p> <p>a. Hourly transmission service</p> <p>b. Daily transmission service</p> <p>c. Weekly transmission service</p> <p>d. Monthly transmission service</p> <p>e. Yearly transmission service</p>	<p><i>Enter number and circle one</i> <i>Example:</i></p> <p> <u> 3 </u> Min/ⓓ/W/Mo</p> <p>a. _____ Min/Hr/D/W/Mo</p> <p>b. _____ Min/Hr/D/W/Mo</p> <p>c. _____ Min/Hr/D/W/Mo</p> <p>d. _____ Min/Hr/D/W/Mo</p> <p>e. _____ Min/Hr/D/W/Mo</p>

<u>Section 2a Questions – Transmission Reservations</u>		<u>Response/Ranking</u>
8.	How well do these statements describe your transmission reservation business <i>2-3 years from now</i> ?	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i>
	a. Nearly all of your organization’s reservations will be with one specific transmission provider on a single OASIS node.	a. N/A 1 2 3 4 5 6
	b. Nearly all of your organization’s reservations will be on a single OASIS node with multiple providers.	b. N/A 1 2 3 4 5 6
	c. Your organization’s reservations will be generally made on 5 or less OASIS nodes.	c. N/A 1 2 3 4 5 6
	d. You will make reservations on more than 5 OASIS nodes.	d. N/A 1 2 3 4 5 6
	e. Your organization’s reservation business will be on a system other than OASIS.	e. N/A 1 2 3 4 5 6
9.	What percentage of your organization’s ancillary service arrangements are:	<i>Now / in 2-3 Years</i>
	a. Purchased from the Transmission Provider with whom you reserve transmission?	a. _____/_____
	b. Self-provided by yourself	b. _____/_____
	c. Purchased from a third party?	c. _____/_____
10.	How well do these statements describe your organization’s ancillary services business <i>in 2-3 years</i> ?	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i>
	a. You want ancillary services purchase to be bundled with the transmission reservation - Providers should just give you whatever ancillary services you need with the reservation.	a. N/A 1 2 3 4 5 6
	b. You would like to know what ancillary services are required, but you would like to retain the flexibility to buy ancillary services from whom you would like.	b. N/A 1 2 3 4 5 6
	c. You expect strong markets to develop for buying and selling ancillary services, including third party sellers and secondary resale markets.	c. N/A 1 2 3 4 5 6
11.	You find it easy to identify transmission paths which can meet your transaction needs by looking at information posted on OASIS.	<i>1 – Strongly Disagree ... 6 – Strongly Agree N/A 1 2 3 4 5 6</i>

<u>Section 2a Questions – Transmission Reservations</u>	<u>Response/Ranking</u>
12. The types of information available on OASIS (not the quality or accuracy of the data for specific Transmission Providers) is satisfactory to your organization in the following areas:	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i>
a. ATC	a. N/A 1 2 3 4 5 6
b. Transmission service prices and discounts	b. N/A 1 2 3 4 5 6
c. Ancillary service prices and discounts	c. N/A 1 2 3 4 5 6
d. Records of your own reservations and ancillary services	d. N/A 1 2 3 4 5 6
e. Audit logs (historical information for accounting or audit)	e. N/A 1 2 3 4 5 6
13. Your organization would be more productive and efficient if display interfaces on OASIS are:	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i>
a. More uniform from one node to another.	a. N/A 1 2 3 4 5 6
b. Allowed to vary to accommodate regional differences	b. N/A 1 2 3 4 5 6
14. It is important for your organization to be able to change your points of receipt/delivery to alternative receipt/delivery points.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> N/A 1 2 3 4 5 6
15. The secondary transmission market (i.e. reselling unused transmission) will be of great interest to your organization <i>in 2-3 years</i> .	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> N/A 1 2 3 4 5 6

Continue to Section 2b on the next page.

<u>Section 2b Questions – Next Hour Business</u>	<u>Response/Ranking</u>
1. Most, if not all, of your organization’s next hour energy scheduling uses non-firm hourly transmission service that you arrange at about the same time as you arrange the schedule.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> N/A 1 2 3 4 5 6
2. Most, if not all, of your next hour energy scheduling utilizes transmission reservations which have been previously arranged a day or more ahead of time.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> N/A 1 2 3 4 5 6
3. For most, if not all, of your next hour business your organization would like to: a. Reserve ancillary services automatically with transmission. b. Reserve transmission and schedule energy at the same time. c. Schedule to the full amount of the reservation. d. Submit a reservation pre-confirmed to save time and steps.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> a. N/A 1 2 3 4 5 6 b. N/A 1 2 3 4 5 6 c. N/A 1 2 3 4 5 6 d. N/A 1 2 3 4 5 6
4. For most next-hour energy transactions, your organization needs to be able to complete the transmission reservation and schedule (from request to confirmation) within: a. Less than a minute b. 1-5 minutes c. 5-30 minutes d. 30 minutes or more is acceptable	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> a. N/A 1 2 3 4 5 6 b. N/A 1 2 3 4 5 6 c. N/A 1 2 3 4 5 6 d. N/A 1 2 3 4 5 6
5. The ability to conduct next hour business on the existing OASIS is primarily hampered by: a. The response time from when the request is submitted. b. The number and complexity of steps to make a reservation. c. The fact that multiple systems are needed for reservation and scheduling. d. The need to negotiate terms and prices.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> a. N/A 1 2 3 4 5 6 b. N/A 1 2 3 4 5 6 c. N/A 1 2 3 4 5 6 d. N/A 1 2 3 4 5 6
6. For next hour transmission reservations, your organization needs to: a. Negotiate transmission and ancillary service prices. b. Issue a separate confirmation (i.e. you would not pre-confirm)	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> a. N/A 1 2 3 4 5 6 b. N/A 1 2 3 4 5 6

Continue to Section 2c on the next page.

<u>Section 2c Questions – Energy Transaction Scheduling</u>		<u>Response/Ranking</u>
1.	What percentage of the energy interchange transactions that your organization schedules remain (from source to sink) within:	<i>Now / in 2-3 Years</i>
	a. A single control area or transmission provider?	a. _____/_____
	b. Two adjacent control areas or transmission providers?	b. _____/_____
	c. More than two control areas or transmission providers?	c. _____/_____
	d. A single NERC region or ISO?	d. _____/_____
	e. Two adjacent NERC regions or ISOs?	e. _____/_____
	f. More than two NERC regions or ISOs?	f. _____/_____
2.	In the future, your organization would prefer to have <u>all</u> of your purchasing and selling of transmission and ancillary services, energy interchange transaction scheduling, and curtailment notification integrated into a common software environment.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> N/A 1 2 3 4 5 6
3.	In the future, your organization would prefer to have <u>next hour business</u> for the purchasing and selling of transmission and ancillary services, energy interchange transaction scheduling, and curtailment notification integrated into a common software environment.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> N/A 1 2 3 4 5 6
4.	In the future, you would prefer to have NERC security tagging automatically handled as a component of schedule management.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> N/A 1 2 3 4 5 6
5.	The ability to negotiate price for transmission service is a key factor in consummating a successful energy deal.	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i> N/A 1 2 3 4 5 6
6.	Your concern about using a system similar to the OASIS for energy transaction scheduling is:	<i>1 – Strongly Disagree ... 6 – Strongly Agree</i>
	a. Response time for receiving critical information.	a. N/A 1 2 3 4 5 6
	b. Number of steps required.	b. N/A 1 2 3 4 5 6
	c. Amount of information required.	c. N/A 1 2 3 4 5 6
	d. Confidentiality of schedule information.	d. N/A 1 2 3 4 5 6
	e. Reliability of the public Internet.	e. N/A 1 2 3 4 5 6
	f. Lack of notification when status changes.	f. N/A 1 2 3 4 5 6
	g. Other _____	g. N/A 1 2 3 4 5 6

<u>Section 2c Questions – Energy Transaction Scheduling</u>		<u>Response/Ranking</u>
7.	Your organization believes that the details of your energy transactions, including source and sink but excluding energy price, should be disclosed to all parties to the transaction, including other merchants.	1 – Strongly Disagree ... 6 – Strongly Agree N/A 1 2 3 4 5 6
8.	The identity of the following parties or transaction information should remain confidential from your market competitors until <i>after the schedule begins</i> : <ul style="list-style-type: none"> a. Transmission Providers and Control Areas on the path b. Merchants party to the transaction c. Sink (load) d. Source (generator) e. Energy price f. Transmission reservation information g. Loss information 	1 – Strongly Disagree ... 6 – Strongly Agree a. N/A 1 2 3 4 5 6 b. N/A 1 2 3 4 5 6 c. N/A 1 2 3 4 5 6 d. N/A 1 2 3 4 5 6 e. N/A 1 2 3 4 5 6 f. N/A 1 2 3 4 5 6 g. N/A 1 2 3 4 5 6
9.	The identity of the following parties or transaction information should remain confidential from your market competitors until <i>30 days or longer after the schedule</i> : <ul style="list-style-type: none"> a. Transmission Providers and Control Areas on the path b. Merchants party to the transaction c. Sink (load) d. Source (generator) e. Energy price f. Transmission reservation information g. Loss information 	1 – Strongly Disagree ... 6 – Strongly Agree a. N/A 1 2 3 4 5 6 b. N/A 1 2 3 4 5 6 c. N/A 1 2 3 4 5 6 d. N/A 1 2 3 4 5 6 e. N/A 1 2 3 4 5 6 f. N/A 1 2 3 4 5 6 g. N/A 1 2 3 4 5 6
10.	If your organization has or expects to have transactions curtailed due to system constraints, what percentage of your curtailments would you expect to be: <ul style="list-style-type: none"> a. On one specific Transmission Provider’s system? b. Within one specific NERC region or ISO? c. Within two specific NERC regions or ISOs d. In multiple (more than two) NERC regions or ISOs 	Now / in 2-3 Years a. _____/_____ b. _____/_____ c. _____/_____ d. _____/_____

Section 2c Questions – Energy Transaction Scheduling**Response/Ranking**

- | | |
|--|--|
| 11. In most cases, your organization would prefer to have an option to pay for re-dispatch to relieve a constraint rather than have your transaction curtailed, for each type of service: | <i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i> |
| a. Firm | a. N/A 1 2 3 4 5 6 |
| b. Non-firm | b. N/A 1 2 3 4 5 6 |
| 12. You prefer to use scheduling systems which are common across North America rather than ones which are custom to each region. | <i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i>

N/A 1 2 3 4 5 6 |
| 13. Your organization prefers <i>in 2-3 years</i> to be able to reserve transmission and schedule energy flow based on actual flows, rather than on a contract path basis. | <i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i>

N/A 1 2 3 4 5 6 |
| 14. Your organization prefers <i>in 2-3 years</i> that the commercial model of the transmission system used for reservations and scheduling be more closely aligned with the physical models that are used for security assessment and transaction curtailments. | <i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i>

N/A 1 2 3 4 5 6 |
| 15. In 2-3 years, market participants will expect to use transmission system models that more closely resemble the physical system, including AC load flows that would show parallel flows and voltage effects of transactions. | <i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i>

N/A 1 2 3 4 5 6 |

Continue with Section 8 of the survey.

Section 3 – Transmission Service Provider

Response/Ranking

- | | |
|--|--|
| <p>1. With respect to using the OASIS ‘front end’ and Internet communications and tools to input and retrieve information to and from OASIS, your organization:</p> <p>a. Uses the OASIS front end today to input and/or retrieve information from OASIS.</p> <p>b. Prefers to use the OASIS front end to input and/or retrieve information from OASIS in the future.</p> | <p><i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> |
| <p>2. OASIS connections right <i>now</i> and <i>expected</i> in 2-3 years:</p> <p>a. How many private (other than public Internet access) OASIS connections with Transmission Customers does your OASIS node support?</p> <p>b. How many Transmission Customers do you actively sell services to using the Internet?</p> <p>c. How many reservations do you handle over phone and fax?</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. _____/_____</p> <p>b. _____/_____</p> <p>c. _____/_____</p> |
| <p>3. What is the number of OASIS reservation requests <u>of all types</u> that your organization receives <i>now</i> and <i>expects to receive in 2-3 years</i>:</p> <p>a. <u>Peak</u> number of reservations submitted in any one hour?</p> <p>b. <u>Peak</u> number of reservations submitted in any one day?</p> <p>c. <u>Peak</u> number of reservations submitted in any one week?</p> <p>d. <u>Peak</u> number of reservations submitted in any one month?</p> <p>e. <u>Average</u> number of reservations submitted per month.</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. _____/_____</p> <p>b. _____/_____</p> <p>c. _____/_____</p> <p>d. _____/_____</p> <p>e. _____/_____</p> |
| <p>4. How many reservation requests do you receive <i>now or expect to receive in 2-3 years</i> on a <u>per month average, for each type of service below</u>?</p> <p>a. Hourly service</p> <p>b. Daily service</p> <p>c. Weekly service</p> <p>d. Monthly service</p> <p>e. Yearly service</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. _____/_____</p> <p>b. _____/_____</p> <p>c. _____/_____</p> <p>d. _____/_____</p> <p>e. _____/_____</p> |

5. Your expectation is that *in 2-3 years*, the overall transmission reservation process from receipt of the initial request to confirmation by the customer should take how long for each type of service?: *Enter number and circle one*
Example:
 3 Min/Hr/D/W/Mo
- a. Hourly transmission service a. _____ Min/Hr/D/W/Mo
 - b. Daily transmission service b. _____ Min/Hr/D/W/Mo
 - c. Weekly transmission service c. _____ Min/Hr/D/W/Mo
 - d. Monthly transmission service d. _____ Min/Hr/D/W/Mo
 - e. Yearly transmission service e. _____ Min/Hr/D/W/Mo
6. What is the percentage of reservations submitted to your organization through: *Now / in 2-3 Years*
- a. The Internet GUI interface? a. _____/_____
 - b. Computer-to-computer directly with the TC? b. _____/_____
 - c. Computer-to-computer with a value-added service provider c. _____/_____
 - d. Other (e.g. phone, fax)? d. _____/_____
7. The performance of the following items allow adequate response performance for all transmission reservations, including next hour: *1 – Strongly Disagree ...*
6 – Strongly Agree
- a. Private connections a. N/A 1 2 3 4 5 6
 - b. Public Internet b. N/A 1 2 3 4 5 6
 - c. Provider back end applications c. N/A 1 2 3 4 5 6
 - d. Databases d. N/A 1 2 3 4 5 6
 - e. CPU and hardware system performance e. N/A 1 2 3 4 5 6
 - f. Internet connection bandwidth f. N/A 1 2 3 4 5 6
 - g. Interfaces with other systems g. N/A 1 2 3 4 5 6
8. Your organization would prefer to have Customers use one system to input requests for transmission services, ancillary services, and energy scheduling. *1 – Strongly Disagree ...*
6 – Strongly Agree
N/A 1 2 3 4 5 6
9. Your organization would prefer to combine the purchase of transmission services, ancillary services, and energy scheduling as one transaction. *1 – Strongly Disagree ...*
6 – Strongly Agree
N/A 1 2 3 4 5 6
10. Your organization would prefer to have transaction tagging automatically handled by Phase 2 OASIS. *1 – Strongly Disagree ...*
6 – Strongly Agree
N/A 1 2 3 4 5 6
11. Your organization would prefer to use Web-based technology similar to the current OASIS system to allow Transmission Customers to input transaction schedules. *1 – Strongly Disagree ...*
6 – Strongly Agree
N/A 1 2 3 4 5 6

12. Your organization's biggest concern about using a system similar to OASIS for scheduling is:
- 1 – Strongly Disagree ...
6 – Strongly Agree*
- | | | | | | | | |
|---|--------|---|---|---|---|---|---|
| a. Timeliness in receiving critical information | a. N/A | 1 | 2 | 3 | 4 | 5 | 6 |
| b. Breaches in confidentiality | b. N/A | 1 | 2 | 3 | 4 | 5 | 6 |
| c. Security of your other systems connected to the OASIS | c. N/A | 1 | 2 | 3 | 4 | 5 | 6 |
| d. Reliability of data input by customers | d. N/A | 1 | 2 | 3 | 4 | 5 | 6 |
| e. Back end requirements to integrate this new system with your existing energy scheduling functions. | e. N/A | 1 | 2 | 3 | 4 | 5 | 6 |

Continue to Section 8 of the survey.

Section 4 – Control Area Operators

Response/Ranking

- | | |
|--|---|
| <p>1. How many entities schedule energy transactions into or out of your Control Area?:</p> <p>a. In a given hour (Average/Peak)</p> <p>b. In a given weekday (Average/Peak)</p> <p>c. In a given weekend (Average/Peak)</p> <p>d. In a given week (Average/Peak)</p> <p>e. In a given month (Average/Peak)</p> | <p><i>Now /In 2-3 years</i></p> <p>a. A___/P___/A___/P___</p> <p>b. A___/P___/A___/P___</p> <p>c. A___/P___/A___/P___</p> <p>d. A___/P___/A___/P___</p> <p>e. A___/P___/A___/P___</p> |
| <p>2. How many interchange transaction schedules do you process into or out of your Control Area?:</p> <p>a. In a given hour (Average/Peak)</p> <p>b. In a given weekday (Average/Peak)</p> <p>c. In a given weekend (Average/Peak)</p> <p>d. In a given week (Average/Peak)</p> <p>e. In a given month (Average/Peak)</p> | <p><i>Now /In 2-3 years</i></p> <p>a. A___/P___/A___/P___</p> <p>b. A___/P___/A___/P___</p> <p>c. A___/P___/A___/P___</p> <p>d. A___/P___/A___/P___</p> <p>e. A___/P___/A___/P___</p> |
| <p>3. How many interchange transactions do you schedule internal to your Control Area?:</p> <p>a. In a given hour (Average/Peak)</p> <p>b. In a given weekday (Average/Peak)</p> <p>c. In a given weekend (Average/Peak)</p> <p>d. In a given week (Average/Peak)</p> <p>e. In a given month (Average/Peak)</p> | <p><i>Now /In 2-3 years</i></p> <p>a. A___/P___/A___/P___</p> <p>b. A___/P___/A___/P___</p> <p>c. A___/P___/A___/P___</p> <p>d. A___/P___/A___/P___</p> <p>e. A___/P___/A___/P___</p> |
| <p>4. What percentage of your transaction schedules do you process by?:</p> <p>a. Phone.</p> <p>b. Faxed paper form customized to your Control Area.</p> <p>c. NERC tagging form faxed or by email.</p> <p>d. Non-Internet-based electronic system.</p> <p>e. Internet-based electronic system.</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. _____/_____</p> <p>b. _____/_____</p> <p>c. _____/_____</p> <p>d. _____/_____</p> <p>e. _____/_____</p> |

5. How long do you require to evaluate and approve a request to schedule an energy transaction? *Enter a number of:*
*Example: 1 Min **Hr** D*
- a. Simple transaction with pre-approved transmission. a. _____ Min/Hr/D
 - b. Complex transaction requiring system study. b. _____ Min/Hr/D/W
 - c. A transaction submitted for next hour with pre-approved transmission reservations. c. _____ Min
6. Your organization would prefer to have only one system to handle the selling of transmission services, ancillary services, and energy scheduling. *1 – Strongly Disagree ...*
6 – Strongly Agree
 N/A 1 2 3 4 5 6
7. Your organization prefers to have transaction tagging automatically processed by the next generation of OASIS/Market Interface. *1 – Strongly Disagree ...*
6 – Strongly Agree
 N/A 1 2 3 4 5 6
8. Your organization prefers to use Web-based technology similar to the current OASIS system to allow Transmission Customers to input transaction schedules. *1 – Strongly Disagree ...*
6 – Strongly Agree
 N/A 1 2 3 4 5 6
9. Your organization’s biggest concern about using a system similar to the OASIS for energy scheduling is: *1 – Strongly Disagree ...*
6 – Strongly Agree
- a. Timeliness in receiving critical information a. N/A 1 2 3 4 5 6
 - b. Breaches in confidentiality b. N/A 1 2 3 4 5 6
 - c. Security of your other systems connected to the OASIS c. N/A 1 2 3 4 5 6
 - d. Reliability of data input by customers d. N/A 1 2 3 4 5 6
 - e. Back end requirements to integrate this new system with your existing energy scheduling functions. e. N/A 1 2 3 4 5 6
10. If transaction details were provided to you electronically from the Phase 2 OASIS/Market Interface, you would use them for Control Area scheduling and confirmation with neighboring Control Areas. *1 – Strongly Disagree ...*
6 – Strongly Agree
 N/A 1 2 3 4 5 6

Continue to Section 8 of the survey.

Section 5 – Security Coordinators

Response/Ranking

- | | |
|--|--|
| <p>1. How many of the following entities do you have in your area of responsibility?:</p> <p>a. Control Areas.</p> <p>b. Transmission Providers</p> <p>c. Transmission Customers</p> <p>d. Merchants scheduling transactions</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. _____/_____</p> <p>b. _____/_____</p> <p>c. _____/_____</p> <p>d. _____/_____</p> |
| <p>2. How do you prefer to receive transaction information?</p> <p>a. Using ICCP over the Inter-Regional Security Network.</p> <p>b. FTP</p> <p>c. TCP/IP and Internet Protocols</p> <p>d. Other _____.</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. Yes / No / Yes / No</p> <p>b. Yes / No / Yes / No</p> <p>c. Yes / No / Yes / No</p> <p>d. Yes / No / Yes / No</p> |
| <p>3. How do you prefer to receive transmission and generation status information and updated PTFDs?</p> <p>a. Using ICCP over the Inter-Regional Security Network.</p> <p>b. FTP</p> <p>c. TCP/IP and Internet Protocols</p> <p>d. Other _____.</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. Yes / No / Yes / No</p> <p>b. Yes / No / Yes / No</p> <p>c. Yes / No / Yes / No</p> <p>d. Yes / No / Yes / No</p> |
| <p>4. <i>In 2-3 years</i>, what per cent of your security related data (system status and conditions) will originate within your region vs. outside your region?</p> | <p><i>Enter percentages</i></p> <p>_____% Int. / ____% Ext.</p> |
| <p>5. <i>In 2-3 years</i>, the ability to perform the security coordinator function in your region will rely on:</p> <p>a. Having information for most of the energy interchange transactions occurring on systems in adjacent regions.</p> <p>b. Having information for certain types of interchange transactions occurring on systems in adjacent regions.</p> <p>c. Having information for transactions occurring in systems remote from your region, but which may affect your region.</p> | <p><i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> <p>c. N/A 1 2 3 4 5 6</p> |

Continue to Section 8 of the survey.

Section 6 – Independent System Operator

Response/Ranking

- | | |
|---|---|
| <p>1. How do the following statements describe scheduling processes in your area:</p> <p>a. Scheduling requirements are unique to your organization, so you would prefer to use scheduling systems custom to your region rather than a common scheduling interface across North America.</p> <p>b. Your organization’s scheduling processes can be adapted to accommodate national standards for interstate commerce.</p> | <p><i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> |
| <p>2. Your organization needs to have access to the following information from the Phase 2 OASIS / Market Interface</p> <p>a. Transmission reservations</p> <p>b. Transaction details</p> <p>c. Ancillary services arrangements</p> <p>d. IDC - transaction flow impact information</p> <p>e. Other _____</p> | <p><i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> <p>c. N/A 1 2 3 4 5 6</p> <p>d. N/A 1 2 3 4 5 6</p> <p>e. N/A 1 2 3 4 5 6</p> |
| <p>3. You will be using the following types of systems in 2-3 years:</p> <p>a. Vendor-supplied EMS customized to your region.</p> <p>b. In-house developed applications and systems.</p> <p>c. Internet-based information systems.</p> <p>d. Other _____</p> | <p><i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> <p>c. N/A 1 2 3 4 5 6</p> <p>d. N/A 1 2 3 4 5 6</p> |
| <p>4. The percent of energy transactions in your system which remain entirely within the ISO (Internal) compared to transactions which cross into or out of the ISO (External) is or is expected to be (<i>fill in the responses</i>).</p> | <p><i>Today</i></p> <p>____% Int. ____% Ext.</p> <p><i>In 2-3 years</i></p> <p>____% Int. ____% Ext.</p> |
| <p>5. The transaction scheduling period within the ISO is or will be (<i>circle the correct responses in the column to the right</i>):</p> <p>a. Hourly.</p> <p>b. Day ahead.</p> <p>c. Other _____.</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. Yes / No / Yes / No</p> <p>b. Yes / No / Yes / No</p> <p>c. Yes / No / Yes / No</p> |

6. What types of information from the ISO would you envision needing to post over the Phase 2 OASIS / Market Interface.

Fill in responses and use additional sheets if needed:

Continue with Section 8 of the survey.

Section 7 –Power Exchange

Response/Ranking

- | | |
|---|---|
| <p>1. How do the following statements describe scheduling processes in your area:</p> <p>a. Scheduling requirements are unique to your organization, so you would prefer to use scheduling systems custom to your region rather than a common scheduling interface across North America.</p> <p>b. Your organization’s scheduling processes can be adapted to accommodate national standards for interstate commerce.</p> | <p><i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> |
| <p>2. You need to have access to the following information from the Phase 2 OASIS / Market Interface:</p> <p>a. Transmission reservations</p> <p>b. Transaction details</p> <p>c. Ancillary services arrangements</p> <p>d. IDC - transaction flow impact information</p> <p>e. Other _____</p> | <p><i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> <p>c. N/A 1 2 3 4 5 6</p> <p>d. N/A 1 2 3 4 5 6</p> <p>e. N/A 1 2 3 4 5 6</p> |
| <p>3. You will be using the following types of systems in 2-3 years:</p> <p>a. Vendor-supplied EMS customized to your region.</p> <p>b. Power exchange programs customized to your region.</p> <p>c. Internet-based market information systems.</p> <p>d. Other _____</p> | <p><i>1 – Strongly Disagree ...</i>
<i>6 – Strongly Agree</i></p> <p>a. N/A 1 2 3 4 5 6</p> <p>b. N/A 1 2 3 4 5 6</p> <p>c. N/A 1 2 3 4 5 6</p> <p>d. N/A 1 2 3 4 5 6</p> |
| <p>4. The percent of energy transactions in your system which remain entirely within the Power Exchange (Internal) compared to transactions which cross into or out of the Exchange (External) is or is expected to be (<i>fill in the responses</i>).</p> | <p><i>Today</i>
____% Int. ____% Ext.</p> <p><i>In 2-3 years</i>
____% Int. ____% Ext.</p> |
| <p>5. The transaction scheduling period within the Power Exchange is or will be (<i>circle the correct responses in the column to the right</i>):</p> <p>a. Hourly.</p> <p>b. Day ahead.</p> <p>c. Other _____.</p> | <p><i>Now / in 2-3 Years</i></p> <p>a. Yes / No / Yes / No</p> <p>b. Yes / No / Yes / No</p> <p>c. Yes / No / Yes / No</p> |

6. What types of information from the Power Exchange would you envision needing to post over the Phase 2 OASIS / Market Interface.

Fill in responses and use additional sheets if needed:

Continue with Section 8 of the survey.

Transmission Reservations

Current ATCs for future time horizons for each path.	N/A	1	2	3	4	5	6	S
Historical ATC information for each path.	N/A	1	2	3	4	5	6	S
Supporting information for ATC calculations.	N/A	1	2	3	4	5	6	S
NERC or regional curtailment priority for transmission product.	N/A	1	2	3	4	5	6	S
ATC values adjusted within minutes following reservations.	N/A	1	2	3	4	5	6	S
Status information of transmission network and facilities.	N/A	1	2	3	4	5	6	S
Real-time line loading information.	N/A	1	2	3	4	5	6	S
Status information of generators on the network.	N/A	1	2	3	4	5	6	S
Transmission products offered.	N/A	1	2	3	4	5	6	S
Transmission service price negotiation on-line.	N/A	1	2	3	4	5	6	S
Transmission service price negotiation off-line.	N/A	1	2	3	4	5	6	S
Customer submit reservation pre-confirmed.	N/A	1	2	3	4	5	6	S
Withdraw from transmission negotiations.	N/A	1	2	3	4	5	6	S
Your own reservation records.	N/A	1	2	3	4	5	6	S
Your own historical reservation records.	N/A	1	2	3	4	5	6	S
<u>Current</u> reservation records of <u>all</u> Transmission Customers.	N/A	1	2	3	4	5	6	S
<u>Historical</u> reservation records of <u>all</u> Transmission Customers.	N/A	1	2	3	4	5	6	S
TC request transmission reservation and TP respond.	N/A	1	2	3	4	5	6	S
Transmission Customer confirm reservation request which was approved.	N/A	1	2	3	4	5	6	S
Seller reassign transmission rights to another party.	N/A	1	2	3	4	5	6	S
Transmission Customer resell previously purchased transmission rights.	N/A	1	2	3	4	5	6	S
Conduct a futures market for transmission service.	N/A	1	2	3	4	5	6	S
Others (fill in):								

Thank you for completing this survey. Please check one of the following, then return the survey to the address on page 2:

- | | |
|--|-------------|
| a. You have more information to provide on future requirements for OASIS/ Market Interface - please schedule a telephone interview to follow up. | a. Yes / No |
| b. You have expressed all of your requirements in this survey, please do not follow up for further information. | b. Yes / No |

Thank you for completing this survey. Please return the survey by following the instructions in the cover section.

Please add any additional comments you would like to provide as input to OASIS Phase 2 design (use additional pages as necessary).