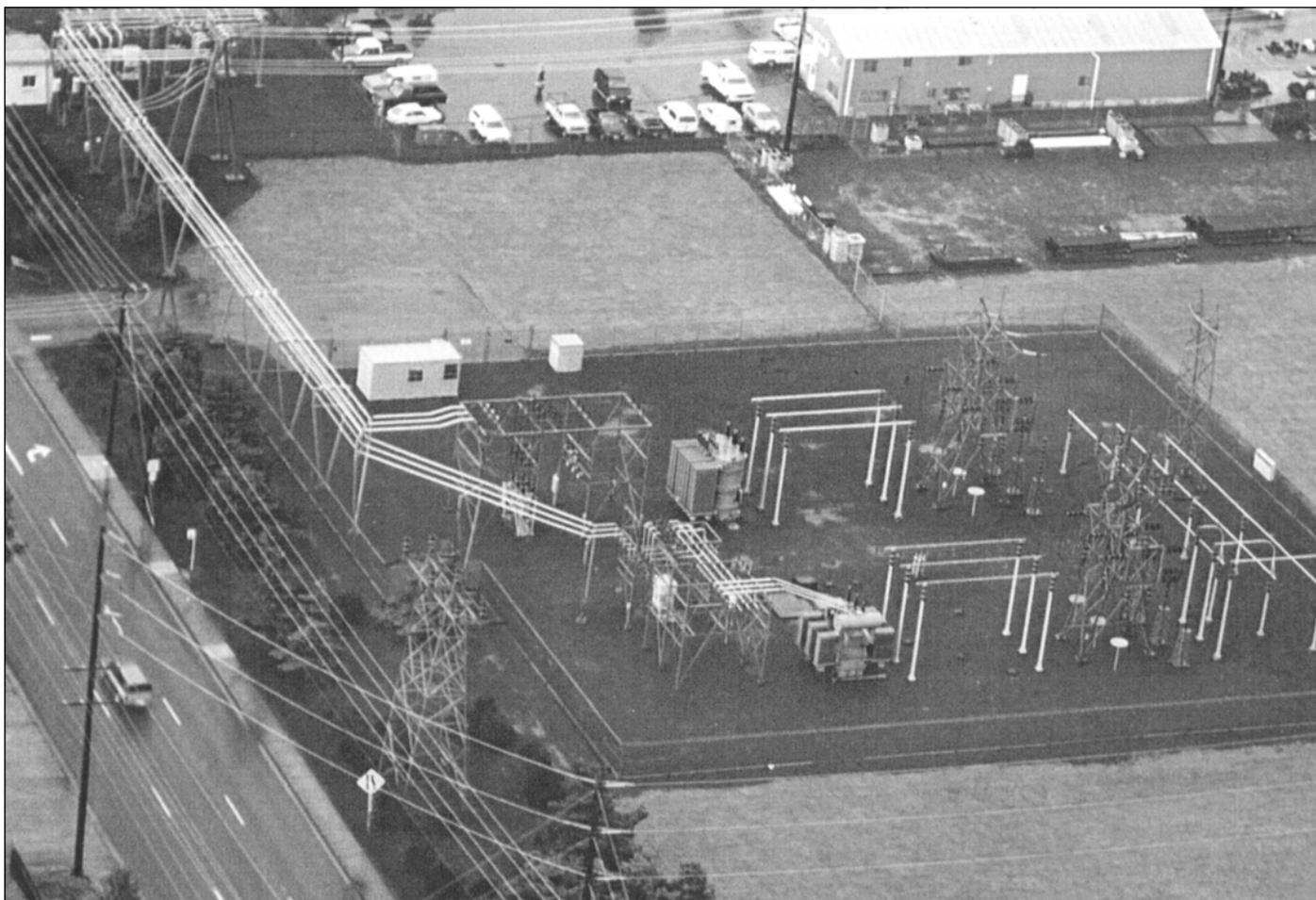


# ACCESS

T B L M A R K E T I N G B I - M O N T H L Y

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Springfield Substation. (see story page 6) Photo by Tom Wolcott

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## Developers and utilities respond to power shortage and high prices

*High market prices and a West Coast power system stretched to its limits are providing energy developers and utilities a strong incentive to build more generating facilities as quickly as possible. Their proposals, which total more than 24,000 megawatts of generation, come in all sizes and use a variety of*

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## Developers and utilities respond to power shortage and high prices

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*fuels, but only about half will ever move beyond the drawing board. However, some will begin generating power this year and others are expected to come on line over the next few years to help ease the Northwest's tight energy market.*

*What they all have in common is the need to get their product to a market hungry for power and for that they need transmission services. If the developer intends to move the power over the Bonneville Power Administration system, he must apply for transmission service. Whether the generator is a small diesel engine set up to meet local peak demand, a mid-sized natural gas turbine set up on an industrial site or a full-sized combined cycle natural gas turbine, an application for transmission service is still necessary.*

*The volume of interest, along with the complexity of some of the projects, is causing the Transmission Business Line to look for ways to speed up the process. For larger projects that require transmission inter-*

*connections, the time it takes from initial application to final approval is more than a year, but the TBL is looking for more resources that will allow it to streamline those processes. For utility projects that are small and will have little impact on the transmission system, the TBL has established a separate and quicker route that allows utilities to do much of the work.*

*At the same time it seeks a way to shorten the application process for generators, the TBL must look for ways to reinforce its transmission system so that it can integrate the new generators into the Northwest grid. And, it must also ease the bottlenecks, known as cutplanes, where demand for space on its wires often exceeds transmission capacity. That requires a significant investment in infrastructure.*

*Three articles in this edition of ACCESS address each of these areas: the increase in transmission applications from large generators, a short-term move in the region toward the installation of high cost, yet economic, small generators, and TBL's plan to integrate all these generators into the Northwest grid.*

## Large generation proposals double in less than a year

In just nine months, generation proposals asking the Transmission Business Line for transmission services have more than doubled from a combined 9,000 MW in July 2000 to over 24,000 MW today. That is far more than the region needs to fatten its now-slim energy margins. Of the more than 40 requests many are simply exploratory and may never come on line. However, three large projects are scheduled to begin generating this year, several more will come online in 2002, and a number of mid-sized projects also could be adding power to the region within a year.

Due to the volume of requests,

each application for transmission service now takes about one year to process, including several months waiting while in the queue and then about nine more months to complete a system impact study, which determines what facilities will be needed to service the generator, and an environmental impact statement.

With a transmission system already constrained along many paths, those studies have become very complex, according to Mike Raschio, Account Executive with the TBL.

"To integrate some of these generators requires major substation work, such as 230 kV circuit breakers, and

others will even require some major system reinforcement," Raschio said.

He said TBL anticipated much of this growth in generation and is already planning reinforcement projects along constrained transmission paths. However, Raschio wonders if a new 500 kV line between McNary and John Day scheduled for completion in 2004 will be enough if all 5,000 MW of generation proposed for the McNary area gets built.

"Once many of these transmission reinforcement projects are completed, it will become much easier to determine the system impact of generation

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## Large generation proposals double in less than a year

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projects on the system,” Raschio said.

Several large generators will come online this year, including the 480 MW Klamath project, owned by PacifiCorp, and the 265 MW Rathdrum project, owned by Avista. Both will add power to the Northwest power system in July. In addition, PacifiCorp Power Marketing will begin buying the output of the 300 MW Stateline wind project in eastern Oregon and Washington beginning this fall. At least 90 MW of that project will leave the project over TBL transmission lines. That’s 835 MW connected to TBL lines by December.

Other projects are under construction and will begin generating in 2002,

including the 260 MW Coyote Springs No. 2 (Coyote Springs No. 2 LLC developer) and the 536 MW HHP Hermiston (Calpine developer). Both are at Boardman, Ore.

Fredrickson, a 270 MW generator developed by West Coast Energy, will go commercial near Tacoma in 2003.

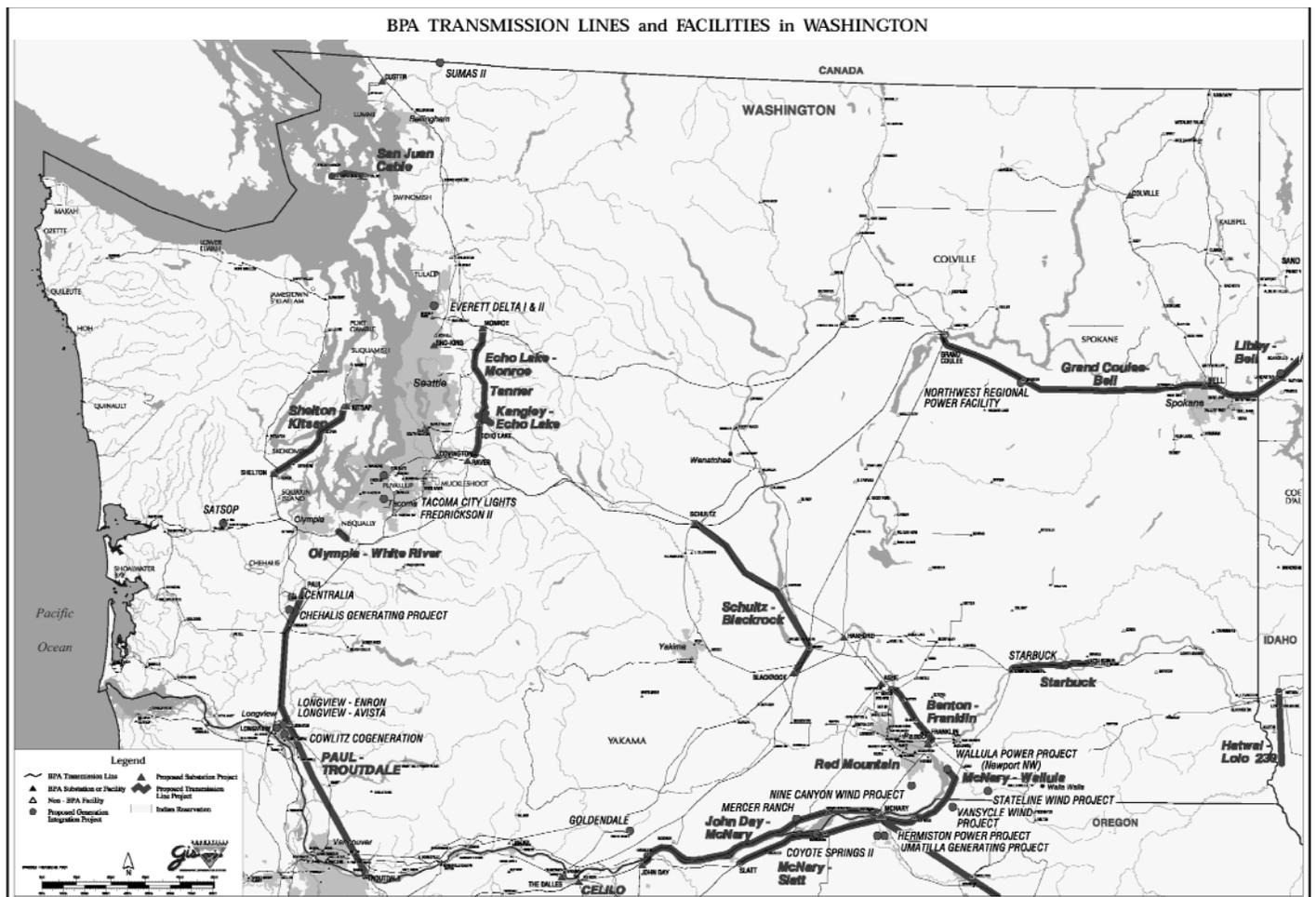
There are mid-size projects in the process, as well. Those include a 50 MW combustion turbine at the Alcoa substation in Vancouver, Wash., developed by Calpine, and a 180 MW turbine owned by GNA Energy that will go in at Goldendale, Wash.

If these mid-size projects don’t ask for long-term firm transmission, they can be connected quicker, but only with the acknowledgement that they may not be able to operate at all times, Raschio said. They may instead opt for short term firm or non-firm

services while the plant is in use.

“These are more compact generators that can be moved and they don’t require a lot of infrastructure other than gas and transmission,” Raschio said. They are likely to be used in the interim for back-up energy sources for maintenance or unplanned outages, he added. “The short-term energy market is critical and the costs are up, so there is a lot of incentive to get some of these smaller projects in as quickly as possible.”

Although the interconnection process for large projects takes about a year, Raschio said most of the developers are planning and getting permits in parallel with the transmission request process. Still, the TBL is looking internally for ways to speed up the process by putting more people and resources into the job.



TBL is planning infrastructure improvements to integrate new generation and relieve congestion. This map shows both. Transmission routes are approximate and not all projects have or will receive final approval.

## Small generators help utilities meet peak loads

The high cost of spot market electricity along with rising natural gas prices has some utilities looking to small generators to fill in the gaps when demand is up. They are easy to install and can be tied into a utility's distribution system in a matter of months, giving utilities immediate access to a fairly high cost, yet stable energy source to help meet peak demand.

Although utilities anticipate that most of these generators will be used to serve local loads, the generators still will affect the transmission grid and so need to be integrated safely into the system. That is resulting in a large number of requests for connection within the Bonneville Power Administration's load control area. In February alone, the TBL received 8 written requests and 21 verbal requests to install small generators – most to hook up multiple small generators about 1-1/2 megawatts in size – and it expects more requests in the coming months.

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THE GENERATION COULD COST AS MUCH AS \$150 PER MWH, MOSTLY DUE TO THE HIGH COST OF DIESEL FUEL, BUT WHEN THE VOLATILE ENERGY MARKET IS SELLING A MWH FOR \$300 TO \$600, THAT PRICE LOOKS PRETTY GOOD.

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Small-scale generators were generally used in the past to provide back-up power during outages or to provide power at new building sites where distribution was non-existent. But, today's high spot market prices are giving utilities another reason to have these generators waiting in the wings.

“Over the past several years, a number of Northwest utilities had diversified their energy sources from BPA

and had planned to go out on the market for additional energy,” said Ed Peterson, manager of TBL's Customer Service Planning and Engineering department. “But, with a short supply of energy this winter, market prices are high and they're looking to fill the gap.”

Peterson added that the utilities may not need the energy all the time and could sell some of the power to help offset the cost of the small generators. The generation could cost as much as \$150 per MWh, mostly due to the high cost of diesel fuel, but when the volatile energy market is selling a MWh for \$300 to \$600, that price looks pretty good, he said.

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IN FEBRUARY ALONE, THE TBL RECEIVED 8 WRITTEN REQUESTS AND 21 VERBAL REQUESTS TO INSTALL SMALL GENERATORS – MOST TO HOOK UP MULTIPLE SMALL GENERATORS ABOUT 1-1/2 MEGAWATTS IN SIZE – AND IT EXPECTS MORE REQUESTS IN THE COMING MONTHS.

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Among those asking for service in February was the Springfield Utility Board in Oregon. SUB is already installing 18 generators that will produce about 25 MW. They are planning to go online by April 1. Clark Public Utilities plans to install 30 generators by summer, as do Klickitat PUD and Grays Harbor PUD. Tacoma Public Utilities has been using small generators this winter to help cut the sting caused by market prices.

Not all are for diesel generators, Peterson said. Some of the requests are for natural gas, wood waste or wind generators. No matter what the fuel source, the requests for new small-scale generators present a challenge for the TBL, which must assess how each of the requests for generation affects the transmission system

before the generators begin to crank out power. Peterson said the most important issue is relay protection which changes based on where the generators are connected to the transmission system, but TBL also needs data about when and how much the generators will produce so it knows just how much generation there is in its control area.

“The information is still needed, but it's not as important if the new generation will be used only within the utility's system,” Peterson said. “However, if they plan to market that energy outside their system, that is a more complex issue.”

He said studies on small local generators can take about three months, but that TBL is making efforts to streamline the process because of the number of requests and the speed at which utilities want the generators installed. That includes allowing the utilities to do as much of the planning and design work as possible and simply facilitating them through the process.

“On the other hand, if the utility wants to market the output of those generators and they want long-term firm transmission, they would have to get in the queue along with the large generation projects,” Peterson said.

That process could take as long as a year because of its complexity and because of a backlog for large projects. Energy developers have recently submitted a record number of transmission requests.

Utilities that want to market power from a small generator could get around the longer process by using existing transmission contracts or to rely on short-term transmission markets, Peterson said.

“There is a lot of emphasis in the Northwest to get this done,” Peterson said. “We want to make sure this works quickly for utilities and for us.”

## New wire planned in region

Several large transmission projects are approved and more are on the drawing board in an effort to relieve transmission congestion, boost reliability and integrate new Northwest power plants, all over the next five years.

The urgency for the projects is driven largely by the huge response of generation developers to the West Coast power crisis and the need to get the new power to market. Couple that with the need to beef-up several areas where demand for space on the wires often exceeds transmission capacity and the urgency increases for the Transmission Business Line to make a significant investment in infrastructure as soon as possible.

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“THE PROJECTS WILL ADD MARGIN BACK INTO THE TRANSMISSION SYSTEM, WHICH AT THIS POINT IS BEING PUSHED TO ITS LIMITS.”

VICKIE VANZANDT  
TBL VICE PRESIDENT OF  
OPERATIONS AND PLANNING

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“If you put together a scenario with three ingredients – a rising demand for electricity, about 6,000 to 8,000 megawatts of new generation due to come on line in the next few years and a regional transmission system already slim on capacity – you have a major crisis on your hands,” said Vickie VanZandt, TBL vice president of operations and planning. “This is what we’re confronted with and we need more wires in the air to handle it.”

Although much of the work to integrate the new generators into the transmission system will be funded by the developers, the TBL still has significant investment to ensure the power gets to market whenever it is

needed. That will require several new lines in the next few years.

Some of those lines are designed to send power directly to market, such as one planned west of McNary Dam, which is designed specifically to move a considerable amount of new power that will be produced by generators planned in eastern Washington and Oregon. Others will help relieve congestion in Puget Sound and at the North of John Day Cutplane.

The projects will add margin back into the transmission system, which at this point is being pushed to its limits, VanZandt said, as she listed other benefits of building new lines:

- An unimpeded flow of power is necessary for a competitive market to work.
- New lines will help the region meet loads even during outages.
- They will allow the TBL to do the necessary maintenance on lines with less impact on the market.
- Allow for the ability to meet regional load under a variety of water conditions.
- Without the reinforcements, RTO West may start with a regional grid that is seriously congested.

“The cost is significant, but so are the benefits,” VanZandt said. “This infrastructure plan calls for an additional \$775 million over the \$1.3 billion we’ve already submitted to the Office of Management and Budget for 2002 to 2006.”

As the system integrates 5,000 to 5,500 MW of new generation, the reinforcement upgrades will pay for themselves, VanZandt added. Not all projects – either generation or transmission – are approved at this point, but TBL management has identified and approved three major projects that address generation integration and congestion. These projects are scheduled for completion between fiscal years 2002-2004.

Project requirements for the Kangle-Echo Lake 500 kilovolt line

and the Snoking 500/230-kV transformer addition are well defined at this point and the TBL expects to complete the project in 2002. These projects will cost about \$32 million and will go a long way towards relieving congestion in northern Puget Sound, according to Mark Bond, TBL manager for Network Planning.

Considerable reliability will be added to the North of John Day and North of Hanford Cutplanes when the Schultz-Black Rock 500 kV project is completed in 2004. Bond said the 59-mile long project includes a new substation and will cost about \$55 million.

“This project addresses one of the most congested Cutplanes in the system,” Bond said. “The line will relieve stress on the Northwest grid during the summer, but it also increases the grid’s ability to integrate the new generation, meet fish mitigation responsibilities and increases the capability of the interties to the Southwest.”

Two lines scheduled for 2004 to 2005 will integrate the huge 1,200 MW Starbuck project in eastern Washington. A Starbuck to Lower Monumental 500-kV line and a

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Send your letters and comments to your account executive or to “Access: Letters to the Editor,” Bonneville Power Administration, Transmission Business Line – Attn: Linda Hunziker TMP-Dittz, P.O. Box 491, Vancouver WA 98666; e-mail: llhunziker@bpa.gov

## For sale by owner

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The recent sale of six substations to Clark Public Utilities brings to 70 the number the Bonneville Power Administration has sold to customers since 1996. That's about one-third of the 221 delivery substations BPA owned at that time and the agency expects to sell even more to customers as ownership becomes more and more financially attractive.

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**"WE PROMISED TO OFFER TO SELL THE FACILITIES AS A WAY TO HELP CUSTOMERS MITIGATE THE RISING CHARGES FOR DELIVERING POWER THROUGH THOSE FACILITIES."**

**ED PETERSON**

**MANAGER OF TBL'S**

**CUSTOMER SERVICE**

**PLANNING AND**

**ENGINEERING DEPARTMENT.**

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BPA's Transmission Business Line is making good on a promise it made during the 1996 transmission rate proceedings to sell smaller substations to customers who show an interest in owning them.

"We promised to offer to sell the facilities as a way to help customers mitigate the rising charges for delivering power through those facilities," said Ed Peterson, manager of TBL's Customer Service Planning and Engineering department. "After discussions with customers to develop the substation sales policy, we began the system-wide program in November 1996 to offer as many for sale as customers wanted."

Peterson said the charges customers pay to receive power through these substations rose with the 1996 rate case and are rising again as a result of the 2000 rate settlement. That increase will go into effect Oct. 1, 2001. However, the TBL agreed with customers in 1996 to look for ways to help them weather the rising charges, including an offer to transfer ownership of the facilities.

The program helps both customers and TBL, said Mike Raschio, TBL Account Executive.

"Many customers want to reduce the charges for delivering power and owning the facilities sometimes works best for them," Raschio said. "For TBL, the sale provides cash and it reduces our annual O&M costs."

The most recent sale was Feb. 15 when TBL sold six substations to Clark Public Utilities. Those include

the Chealatchie, Mill Plain, Vancouver Shipyard, Camas, Fishers Road and Carborundum Substations.

"Clark has wanted to purchase these substations from us for about a decade because it made economic sense to them," Raschio said. "I'm happy we were able to work out a deal."

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**"HOW MANY WE SELL DEPENDS ON THE CUSTOMER AND HOW IT FITS WITH THEM FROM A COST, MAINTENANCE AND RELIABILITY STANDPOINT."**

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Customers have been paying a system average rate, which since October 1996 has been \$9 per kW per year, but that goes up to over \$11 Oct. 1. Direct Service Industries, which generally are served by a 13.8 kV substation, can also buy the facilities that serve them. Their rate is based on the combination of TBL's investment in the facility and O&M costs.

"How many we sell depends on the customer and how it fits with them from a cost, maintenance and reliability standpoint," Peterson said. "We're willing to sell if they're willing to pay the price we need to stay whole."

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## New Wire Planned in Region

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McNary to John Day 500 kV line will help bring new generation to market. The developer of the generation project will cover the cost of those lines, according to John Quinata, TBL manager of Scheduling and Estimating.

"There are other projects we think are needed, but they are conceptual in nature and have yet to receive approval or funding," Bond said. Most are scheduled for completion by 2006. Some of those projects are:

- Paul to Troutdale 500 kV line would integrate the 250 MW to 2,100 MW of proposed generation along the I-5 corridor.
- Monroe to Echo Lake 500 kV line would integrate 250 MW to 1,300 MW of proposed generation in Puget Sound.
- McNary to Wallula 500 kV line would integrate generation proposed at Wallula.
- Grand Coulee to Bell 500 kV line and the Bell to Libby 230-kV line would help relieve congestion from Montana.
- McNary to Brownlee and Hatwai to Lolo 230 kV lines would increase the capacity into Idaho by 150 MW to 200 MW.
- A McNary to Slatt 500 kV line might also need to be built if more generation is developed in the Hermiston or lower Snake River areas.

"The details of what we do will depend to a great extent on how many of the proposed generation projects get approved and come on line by 2006," VanZandt said. "But, we need to be prepared and this is our plan."

## BPA considers scheduling coordinator function

A change from multiple transmission providers to a single transmission system has its challenges. RTO West filing utilities are now working out the details of many of the issues as they develop the Stage 2 filing documents. One issue that's being addressed is the responsibilities of scheduling coordinators who transact business with RTO West.

Related to this is the design of SC services the Bonneville Power Administration would offer to customers who will need transmission services once RTO West is functioning. Those customers will need to either become an SC or purchase those services from a third-party.

The Power Business Line already has decided to become an SC to handle its bulk marketing transactions with RTO West and to offer scheduling coordinator services to customers. As it considers what services to offer, it is asking parties in the region, especially customers who may want to purchase such services, to help in their design.

"A scheduling coordinator would be responsible for scheduling loads and resources with the RTO," said Syd Berwager, PBL project manager for developing the scheduling coordinator function. "The SC deals with the RTO and the customer deals with the SC. However, if a customer chooses to use BPA as its SC, they will still deal with BPA in much the same way as they did prior to formation of RTO West."

How that works may not be so simple, especially since the process of designing the RTO is still incomplete. Berwager said it's a little like making an omelet before having the egg. Yet there are steps BPA can take now. It can outline basic principles that will guide the SC function's development and it can get an early grasp of issues that need resolution before RTO West is functioning. BPA will have to offer

whatever SC services are available at the time RTO West becomes operational.

"We can get an idea of what will be required by having customers help us develop the basic questions that we need to answer," Berwager said. "Some questions are what new functions will be required of an SC in the RTO world? What menu of services would BPA develop so that customers can choose those that best meet their needs?"

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### "A SCHEDULING COORDINATOR WOULD BE RESPONSIBLE FOR SCHEDULING LOADS AND RESOURCES WITH THE RTO."

SYD BERWAGER  
PBL PROJECT MANAGER FOR  
DEVELOPING THE SCHEDULING COORDINATOR FUNCTION.

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Down the road we'll have to pinpoint product design, pricing and how we would share benefits, costs and risks associated with providing SC services."

A group made up of customers, along with both PBL and Transmission Business Line staff, will be looking at some organizational issues. According to TBL Account Executive Dennis Oster, who is leading the BPA team responsible for designing the external process, some of those are Standard of Conduct issues that may still exist once the RTO is in motion and how to staff the SC function.

However, there are other even more complex issues customers and others will need to weigh in on, Oster said. They include:

- Which customers are eligible to request scheduling coordinator services from BPA?
- Should scheduling coordinator services be limited to only those

functions required for delivering federal power? Or, should services also include marketing transactions (exports)?

- How should costs and risks of providing the services be allocated?
- Who should be responsible for imbalance costs associated with day-ahead forecasts for demand and generation?
- Who will be responsible for forecasting customer loads, internal generation and next day schedules?

BPA is developing the scheduling coordinator function in parallel with work by others to develop RTO West Stage 2 filing documents, which are scheduled for delivery to the Federal Energy Regulatory Commission in July 2001.

In late April or early May, BPA is planning an educational forum for customers to ensure that all participants start the process with the same information. At the forum, BPA will discuss RTO West requirements, operating models, responsibilities, business practices, risks and costs. After that, it plans to develop a straw proposal for review. That will be ready prior to the RTO West Stage 2 filing this summer.

Once RTO West has sent the Stage 2 filing to FERC, BPA intends to move into phase two of developing the scheduling coordinator position.

"At that point we'll initiate a more intense dialogue about services and pricing, along with what SC duties will be," Berwager said. BPA expects to conclude phase two by the end of the year.

Phase three will set contracts, rates, system design and business practices. That will occur in 2002. Start-up is expected in 2003.

To get involved in this process, call your Account Executive or contact Oster at (360) 418-8282. More information about the scheduling coordinator function is available from either Berwager at (503) 230-5657 or Kieran Connelly, PBL public utilities specialist, at (503) 230-4680.

## Help for contracts

Almost 200 transmission contracts will expire this year and a large chunk have yet to reapply for transmission services. A new tariff and rate schedule begins Oct. 1 for all transmission contracts. Those whose contract expiration date coincides with the tariff /rate schedule change need new contracts which must be signed to get transmission service on that date.

For many customers, this will be the first time they have had to apply for a transmission contract. In the past, the Power Business Line has wrapped transmission service into its power contracts.

The Transmission Business Line settled with customers last year on a new rate schedule and Open Access transmission tariff. Now, the TBL is encouraging customers to begin the contract process as soon as possible to avoid a rush later on.

"If a customer hasn't yet applied for a new contract, they need to apply now," said Nancy Morgan, TBL Account

Executive. The process takes about 60 days, so the application date should be no later than August 1 if they want service on time. "In fact, we're encouraging customers to apply sooner so we can avoid any significant bow wave of requests as we get close to the end of current contracts."

Morgan said the contract application should be definitive about the length of time the customer plans to extend the contract. "TBL is offering a one-time waiver on the application processing fee, but that won't apply a second time if the customer wants to change the application," she said.

The agency is waiving the \$2,500 fee to help customers transition to the TBL's new tariff, but that applies on a one-time basis for each customer.

Morgan said help is available:

- The 2001 tariff and rate schedule can be found on TBL's Internet web page at <http://www.transmission.bpa.gov/tbl/lib/ratecase/default.cfm>.

- At the same web address, the tariff also includes information on what constitutes an application and new contracts in the new template format. A new application is required if a customer submits increased transmission.
- See Attachment A for the Point to Point template.
- See Attachment F for the Network Demand template.
- Once an application is made, it will be posted at the TBL's Open Access Same Time Information System web at <http://www.transmission.bpa.gov/OASIS/BPAT/>.

"However, the simplest way is to call your Account Executive," Morgan said. "They will be able to help you with the application process." She added that customers who already have applied, but haven't received a contract offer should call their AE.

**Bonneville Power Administration**

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