NORTHWEST POWER POOL AREA
ASSESSMENT OF RELIABILITY AND ADEQUACY
2018 SUMMER OPERATING CONDITIONS

May 8, 2018

EXECUTIVE SUMMARY

In view of the present overall power conditions, including the forecasted water condition, the area represented by the Power Pool is estimating that it will be able to meet firm loads including the required operating reserve. Should any resources be lost to the area beyond the contingency reserve requirement and or loads are greater than expected as a result of extreme weather, the Power Pool area may have to look to alternatives which may include emergency measures to meet obligations.

DEMAND

The Northwest Power Pool (Power Pool) sub-reliability region has 22 Balancing Authority Areas and is comprised of all or major portions of the states of Washington; Oregon; Idaho; Wyoming; Montana; Nevada; and, Utah; a small portion of Northern California; and, the Canadian provinces of British Columbia and Alberta. The 2018 coincidental summer peak forecast of 69,500 MW is projected to occur during the last part of July and the early part of August. The 2018 coincidental summer peak is 4.5% greater than last summer's coincidental peak of 66,500 MW. However, the 2017 summer peak occurred during a period of cooler temperatures. Adjusting for normal temperatures, the normalized 2017 summer peak would be 68,500 MW. The normalized growth only is 1.5%. The Power Pool's projected planning margin is greater than 15%, individual areas (U.S. only or Canada) or individual Balancing Authorities will have different projected planning margins.

DEMAND-SIDE MANAGEMENT

The 22 Balancing Authority Areas within the Power Pool have a wide assortment of demand-side management ranging from air conditioning load management, smart grid, and smart meters to programmatic conservation with general concentration on a range of aspects from advanced volt/VAr control to control and energy management. In addition, several entities are required to examine demand-side management options as part of their Integrated Resource Planning (IRP) process. The approximate total of dispatchable and controllable demand-side response is 200 MW.

GENERATION

The installed capacity for the Power Pool is over 115,000 MW, which includes almost 21,500 MW of variable generation. The deliverable capacity of 115,000 MW over a sustained period is dependent upon the availability of fuel (including water) and available transmission. The Power Pool anticipates having enough deliverable capacity including its required operating reserve to meet the summer peak requirements.

TRANSMISSION

There are no concerns associated with transmission during the summer season.

OPERATIONAL ISSUES

Various Balancing Authority Areas have established operating protocols for variable generation to assure reliability is maintained. The Power Pool does not anticipate any reliability concerns or any other unusual operating conditions that could significantly affect reliability for the upcoming summer.

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INTRODUCTION

The Northwest Power Pool (Power Pool) area is one of the four sub-regions of the Western Electricity Coordinating Council (WECC) and is comprised of all or major portions of the states of Washington; Oregon; Idaho; Wyoming; Montana; Nevada; and, Utah; a small portion of Northern California; and, the Canadian provinces of British Columbia and Alberta. The Power Pool in collaboration with its members (22 Balancing Authority Areas (BAA)) has conducted an assessment of reliability in response to the WECC Summer Assessment regarding the ability of the Power Pool to meet the load requirements during the summer 2018. Since the Power Pool is a large and diverse area of the Western Interconnection, its members face unique issues in the day-to-day coordinated operations of the system. The Power Pool area in aggregate is a winter peaking sub-region with a large amount of hydro resources.

Analyses indicate the Power Pool area will have adequate generation capacity and energy, required operating reserve (regulating reserve margin and contingency reserve), and available transmission to be able to meet the forecasted firm loads for the 2018 summer operations, assuming normal ambient temperature and normal weather conditions.

This assessment is valid for the Power Pool area as a whole; however, these overall results do not necessarily apply to all sub-areas (individual members, Balancing Authorities, states, and/or provinces) when assessed separately.

Report Details

- Historic Demand and Energy

  The Northwest Power Pool 2017 coincidental summer peak was 66,500 MW, which occurred during cooler than normal temperatures. However, the 2017 normalized peak was 68,500 MW. The 2017 normalized coincidental summer peak was 100% of the forecast. The coincidental peak occurred during normal temperature conditions.

- Forecasted Demand and Energy

  The economic recession that began in 2007 has had an impact on the Power Pool power usage and future forecasts. There has been no noticeable recovery to date. The 2018 summer peak forecast for the Power Pool area, as one single entity of 69,500 MW is based on normal weather, reflects the prevailing economic climate (slight improvement), and has a 50% probability of not being exceeded.

  The Power Pool area has approximately 1,400 MW of interruptible demand capability and load management, which includes the 200 MW of demand-side management. In addition, the load forecast incorporates any benefit (load reduction) associated with demand-side resources, not controlled by the individual utilities. Some of the entities within the Power Pool area have specific programs to manage peak issues during extreme conditions. Normally these programs are used to meet the entities' operating reserve requirements and have no discernable impacts on the projected Power Pool area peak load.

Under normal weather conditions, the Power Pool area does not anticipate dependence on imports from external areas during summer peak demand periods. However, if much lower than normal precipitation were to occur, it may be extremely advantageous to maximize the transfer capabilities from outside the Northwest Power Pool area to reduce reservoir drafts.

- Resource Assessment

Approximately 60% of the Power Pool resource capability is from hydro generation. The remaining generation is produced from conventional thermal plants and miscellaneous resources, such as non-utility owned gas-fired cogeneration or wind.

Hydro Capability

Northwest power planning is done by sub-area. Idaho, Nevada, Wyoming, Utah, British Columbia and Alberta individually optimize their resources to their demand. The Coordinated System (Oregon, Washington, northern Idaho, and western Montana) coordinates the operation of its hydro resources to serve its demand. The Coordinated System hydro operation is based on critical water planning assumptions (currently the 1936-1937 water year). Critical water in the Coordinated System equates to approximately 11,000 average megawatts of firm energy load carrying capability, when reservoirs start full. Under Average water year conditions, the additional non-firm energy available is approximately 3,000 average megawatts.

The current forecast for the January through July 2018 Volume Runoff (Columbia River flows) at The Dalles, Oregon is 120.7 million acre-feet (Maf), or 119% of the 30-year average.

Last year, the Coordinated System hydro reservoirs refilled to approximately 100% by July 31st.

April through July

This period is the refill season when reservoirs store spring runoff. The water fueling associated with hydro powered resources can be difficult to manage because there are several competing purposes including but not limited to: current electric power generation, future (summer) electric power generation, flood control, biological opinion requirements resulting from the Endangered Species Act, as well as, special river operations for recreation, irrigation, navigation, and the refilling of the reservoirs each year. Any time precipitation levels are below normal, balancing these interests becomes even more difficult.

With the competition for the water, power operations for the 2018 should be normal. The goal is to manage all the competing requirements while refilling the reservoirs to the highest extent possible.

Sustainable Hydro Capability

Operators of the hydro facilities maximize the hydrology throughout the year while assuring all the competing purposes are evaluated. Although available capacity margin at time of peak can be calculated to be greater than 20%, this can be misleading. Since hydro can be limited due to conditions (either lack of water or imposed restrictions), the expected sustainable capacity must be determined before establishing a representative capacity margin. In other words, the firm energy load carrying capability (FELCC) is the amount of energy that the system may be called on to produce, on a firm or guaranteed basis, during actual operations. The FELCC is highly dependent upon the availability of water for hydro-electric generation.

The Power Pool has developed the expected sustainable capacity based on the aggregated information and estimates that the members have made with respect to their own hydro generation. Sustainable capacity is for periods at least greater than two-hours during daily peak periods assuming various conditions. This aggregated information yields a reduction in peak capacity for sustained capability of approximately 7,000 MW. This reduction is more relative to the Northwest in the winter; however, under summer extreme low water conditions, it impacts summer conditions, too.

Thermal Generation

No thermal plant or fuel problems are anticipated. To the extent that existing thermal resources are not scheduled for maintenance, thermal and other resources should be available as needed during the summer peak.

Fuel

The thermal plants within the Power Pool footprint include gas-fired units as well as coal-fired units. The operators of these plants are active in the daily, monthly and annual assessments of deliveries, storage balances and readily accessible supply source. In addition, several of the coal-fired units are mine mouth operations eliminating transportation issues.

Thermal Generation and Hydro Generation Integration

The diversity of the Power Pool provides operational efficiencies. The northwest area of the Power Pool peaks in the winter whereas the eastern area peaks in the summer. Also, the eastern area of the Power Pool has the majority of the thermal- generation whereas the western area of the Power Pool has the majority of the hydro-generation. This allows the maximum integration of the resources to meet the Power Pool coincidental peak for both the winter and the summer. In addition, this allows the twenty BAs to maximize the use of the transmission while meeting firm customer load. The thermal generation in the east integrated with the hydro generation in the west, improves the total available firm energy and increases the Power Pool's area system reliability.

Having the flexibility to use hydro generation to meet peak and base load thermal generation to meet the firm energy requirements is predicated on availability of transmission; refer to the Transmission Operating Issues below.

Renewable Generation

Several states have enacted renewable portfolio standards which will require some Power Pool members within the next few years to satisfy at least 20% of their load with energy generated from renewable resources. This may result in a significant increase in variable generation within the Power Pool area, creating new operational challenges which will have to be addressed soon and appropriate systems need to be in place. Some of the safety net programs such as balancing resources, contingency reserve, and under frequency load shedding will be re-evaluated for effectiveness.

The Power Pool area estimated installed variable generation capacity for 2018 summer season is approximately 21,000 MW, of which approximately 12,000 MW is associated with wind. The wind generation at time of peak load is assumed to be zero. During the Power Pool 2017 summer peak, the wind generation contribution to meeting the peak load was approximately 1,800 MW. However, it had been zero during the prior years. As historical data is gathered, and experience is gained, the contribution to meeting the peak demands by wind will be updated.

The wind generation manufacturers' standard operating temperature for wind turbines range from -10° C to + 40° C (14° F to 104° F). During the summer peaking period, the temperature in the areas where the majority of the wind turbines are located can exceed the 104°F, leaving no capability from the wind generation during those periods.

In addition to wind generation, the remaining renewable generation is as follows: photo voltaic solar 3,150 MW (960 MW behind the meter); 207 other solar (11 MW behind the meter); and green hydro 4,180 (36 behind the meter).

In addition, there is a risk of over-generation in the spring and fall. When both the wind and hydro generation are both in high generation mode and given the environmental constraints on dissolved gases in the river, there are times when generation may exceed load plus the ability to export; however, control performance will be within acceptable limits established by standards. This year (Spring 2018) curtailments have occurred starting in Spring

The Power Pool has undertaken an effort to explore options to better address the over and under generation associated variable generation.

Biomass Generation

The installed capacity of biomass generation within the Power Pool area is approximately 1,900 MW with expected on-peak amounts of 1,700 MW.

Other Generation

Within the Power Pool area there is an underground natural gas storage facility. This storage is located near many of the gas plants located in the Power Pool area, minimizing any effect that a regional gas problem may cause. In addition, one BA in the Power Pool area has an excess of 700 MW of generation that can be fired on diesel fuel.

External Resources

No external resources to the Power Pool area are assumed for the summer season. However, through the Cal-ISO energy imbalance market, energy may transfer between the areas under reliably efficient and economic conditions.

- Transmission Assessment

Several entities are constructing new transmission within the Power Pool area to address load service issues. The new transmission has low impact on the over-all transfer of power from one zone to another. No significant transmission lines are scheduled to be out-of-service during the summer season.

Constrained paths within the Power Pool area are known and operating studies modeling these constraints have been performed. As a result of these studies operating procedures have been developed to assure safe and reliable operations.

System Operating Limits

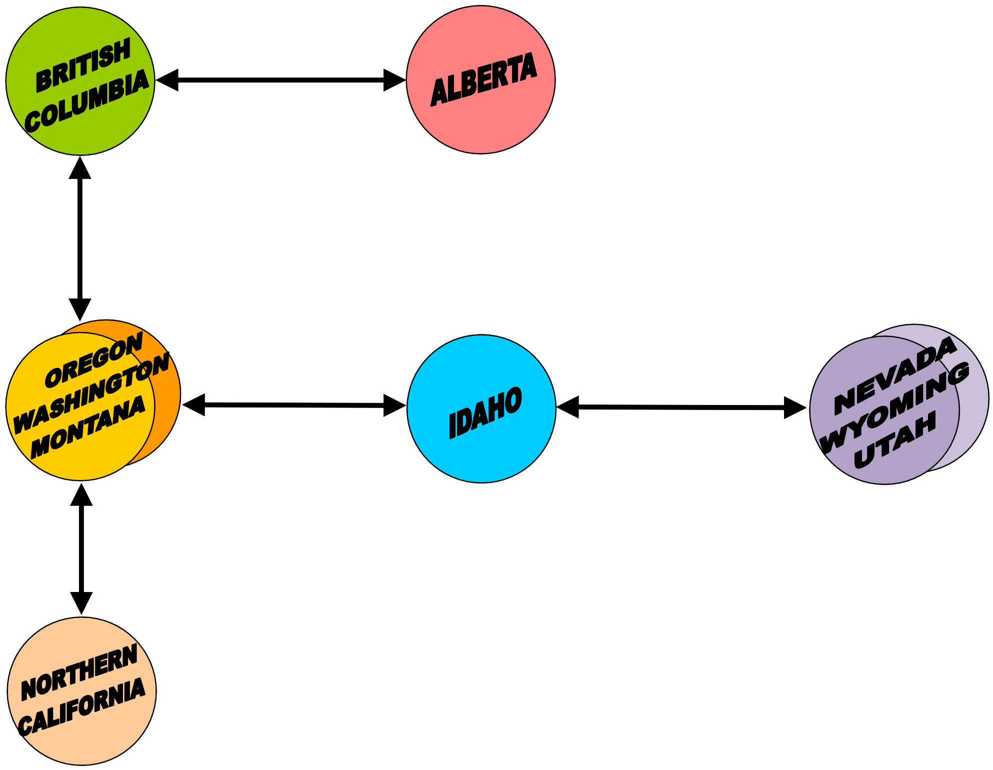
The interregional transmission Total Transfer Capabilities (TTCs) and System Operating Limits (SOLs) (if stability limited) are determined by Transmission Operators, reviewed by the Northwest Operational Planning Group (NOPSG) and passed to appropriate parties. Interregional transmission transfer capabilities for the 2018 summer season have been developed and are listed below:

Path Name	**Path #**	**Rating (MW)**	**2018 Summer TTC/SOL (MW)**
Alberta-BC (E-W)	1	1,000 (E-W)	450-1,000 (E-W)
Alberta-BC (W-E)	1	1,200 (W-E)	600-800 (W-E)
NW-Canada (N-S)	3	3,150 (N-S)	3,150 (N-S)
NW-Canada (S-N)	3	3,000 (S-N)	2,000-3,000 (S-N)
West of Cascades North (E-W)	4	10,200 (E-W)	10,200 (E-W)
West of Cascades North (W-E)	4	10,200 (W-E)	10,200 (W-E)
West of Cascades South (E-W)	5	7,000 (E-W)	7,000 (E-W)
West of Cascades South (W-E)	5	7,000 (W-E)	7,000 (W-E)
West of Hatwai (E-W)	6	4,277 (E-W)	4,275 (E-W)
West of Hatwai (W-E)	6	NA (W-E)	NA (W-E)
Montana to Northwest (E-W)	8	2,200 (E-W)	2,200 (E-W)
Montana to Northwest (W-E)	8	1,350 (W-E)	1,030-1,245 (W-E)
Idaho-Northwest (W-E)	14	1,200 (W-E)	1,200 (W-E)
Idaho-Northwest (E-W)	14	2,400 (E-W)	2,175 (E-W)
Sierra-Idaho (N-S)	16	500 (N-S)	478 (N-S)
Sierra-Idaho (S-N)	16	360 (S-N)	262 (S-N)
Borah-West (E-W)	17	2,557 (E-W)	2,557 (E-W)
Borah-West (W-E)	17	Not Rated	Not Rated
Idaho-Montana (N-S)	18	383 (N-S)	383 (N-S)
Idaho-Montana (S-N)	18	256 (S-N)	256 (S-N)
Bridger West (E-W)	19	2,400 (E-W)	2030-2,400 (E-W)
Bridger West (W-E)	19	Not Rated	Not Rated
Path C (N-S)	20	1,600 (N-S)	1,600 (N-S)
Path C (S-N)	20	1,250 (S-N)	900-1,250 (S-N)
Sierra-PG&E (E-W)	24	160 (E-W)	50-105 (E-W)
Sierra-PG&E (W-E)	24	160 (W-E)	100 (W-E)
Sierra-Utah (E-W)	32	440 (E-W)	355 (E-W)
Sierra-Utah (W-E)	32	235 (W-E)	235 (W-E)

Path Name	Path #	Rating (MW)	2018 Summer TTC/SOL (MW)
TOT 2C (N-S)	35	400/600 (N-S)	515 (N-S)
TOT 2C (S-N)	35	580 (S-N)	580 (S-N)
Brownlee East (W-E)	55	1,915 (W-E)	1,915 (W-E)
Brownlee East (E-W)	55	Not Rated	Not Rated
PDCI (N-S)	65	3,220 (N-S)	3,220 (N-S)
PDCI (S-N)	65	3,100 (S-N)	2,200 (S-N)
NWACI (N-S)	66/76	4,800 (N-S)	4,800 (N-S)
NWACI (S-N)	66/76	3,675 (S-N)	3,675 (S-N)
N of John Day (N-S)	73	Not Rated	7,800 (N-S)
N of John Day (S-N)	73	Not Rated	Not Rated
Hemingway-Summer Lake (E-W)	75	1,500 (E-W)	1,500 (E-W)
Hemingway-Summer Lake (W-E)	75	550 (W-E)	550 (W-E)
NW-Sierra (S-N)	76	300 (S-N)	270 (S-N)
NW-Sierra (N-S)	76	300 (N-S)	300 (N-S)
TOT 2B1 (N-S)	78	600 (N-S)	600 (N-S)
TOT 2B1 (S-N)	78	600 (S-N)	600 (S-N)
TOT 2B2 (N-S)	79	265 (N-S)	250 (N-S)
TOT 2B2 (S-N)	79	300 (S-N)	300 (S-N)
Montana-Southeast (N-S)	80	Not Rated	600 (N-S)
Montana-Southeast (S-N) (HL)	80	Not Rated	390-600 (S-N) (HL)
Montana-Southeast (S-N) (LL)	80	Not Rated	488-600 (S-N) (LL)
Montana Alberta Tie Line (N-S)	83	325 (N-S)	325 (N-S)
Montana Alberta Tie Line (S-N)	83	300 (S-N)	300 (S-N)

Transmission Operating Issues

The vast area of the Power Pool presents unique operating issues associated with transmission constraints. Recognizing these constraints may result in limitation of the Power Pool operating programs.   The critical transmission constraints are known and result in the following zones within the Power Pool.



The Balancing Authorities constantly monitor critical facilities to assure availability of capacity on the transmission system for flow of contingency reserve from one zone to another. Active monitoring of five critical cut planes (cut planes consist of the facilities between the zones) allow for the Power Pool to provide maximum reliability and efficiency. If any of these cut planes become constrained, the ability to maximize reliability and efficiency is significantly reduced within the Power Pool area.

Depending upon the constraint, the above zones may become isolated and therefore dependent upon the resource within the zone to meet the reliability requirements. Operational constraints are seldom a limiting factor. However, when they are limiting, the operating programs are designed to assure reliability is met all the time, even under transmission constraints.

<u>Outage Coordination</u>

The coordinated outage (transmission) system (COS) was designed to assure that outages could be coordinated among all stakeholders (operators, maintenance personnel, transmission users, and operations planners) in an open process. This process had to assure that proper operating studies were accomplished and transmission impacts and limits known, to fulfill a requirement be operated only under studied conditions. The appropriate parties, including the Reliability Coordinator, are involved in the outage coordination process and have direct access to the outage database.

Semi-annual planning - Long-Range Significant Outage Planning (LRSOP)

Transmission Operators and Transmission Owners facilitate outage meetings every six months with each transmission entity's outage coordinator to discuss proposed longer-term outages. Entities discuss anticipated outages needed for time critical construction and periods where transmission capacity may need to be maximized. The outages are posted on the Peak RC COS and on the individual companies' OASIS sites.

Specific responsibilities of LRSOP include:

- Share outage information with all parties affected by outages of significant equipment (i.e., equipment that affects the transfer capability of rated paths). Information is shared two times each year for a minimum of a six-month period. The first meeting each year coordinates outages for July through December. The second meeting coordinates outages for January through June.
- Review the outage schedules to assure that needed outages can be reliably accomplished with minimal impact on critical transmission use.
- Outage coordinators are to post the outages on the Coordinated Outages System within the applicable timeframes.

Next Day Operating Studies

Additional path curtailments may be required depending upon current system conditions and outages. These curtailment studies are performed by the individual path operators based on the outage schedule developed through the COS process. According to the COS process, these studies are performed at least 15 days prior to the outage. Individual path operators and transmission owners may also perform updated next day studies to capture emergency outage requests and current system conditions such as generation dispatch to determine if the SOL studies and limits are still valid. Based on these studies, additional SOL curtailments may be made by the path operators. The modified SOL's are posted on the individual transmission owner's OASIS and appropriate parties are notified.

Appropriate parties also perform system studies to ensure interconnected system reliability. The appropriate parties perform real-time system thermal studies to evaluate current operating conditions across the entire Interconnection. When parties observe real-time reliability problems they contact the path operator to discuss the issue and work on a solution. The appropriate parties will make a directive for action if there is an imminent reliability threat and the Balancing Authority does not eliminate the reliability issue within an appropriate time frame.

Voltage Stability

The WECC-1-CR System Performance Criteria, requirement WRS3 is used to plan adequate voltage stability margin in the Northwest Power Pool area as appropriate. Simulations are utilized to assure system performance is adequate and meets the required criteria.

- Operating Issues

The Power Pool area does not anticipate any operating issues for the 2018 summer season.

- Reliability Assessment Analysis

  The Northwest Power Pool area does not have one explicit methodology for determining an adequacy margin.

  Since no one method exists for the entire Northwest Power Pool area, we have elected to use the NERC's reserve margin analysis for the summer assessment. The 2018 Power Pool area generating capability is projected to be 90,000 MW, prior to adjusting for maintenance. Based on prior operating season, we have assumed zero contributions from wind resources during summer peak conditions. In determining planning margin for the current summer season one must further adjust for operating reserve requirement, which is approximately 4,800 MW. At this point, based on a load of 50% probability not to exceed, the planning margin is still within acceptable range as established by the NERC Planning Committee. However, the ability to sustain such margin over any length of time is highly dependent upon availability of fuel, such as water. Non-coordinated use of the water over time will cause substantial problems in the future.

  A hotter than normal weather event for the entire Power Pool area will add approximately 6,000 MW of load while at the same time under extreme water restrictions the sustained hydro generation would reduce the capability by 7,000 MW. In addition, under a hot weather event, wind generation is expected to be zero. However, accounting for the weather event and the available generation, the Power Pool area will meet the peak load requirements with no additional margin required.

- Contingency Reserve Sharing Procedure

  As permitted by NERC and WECC criteria and standards, the NWPP has instituted a Reserve Sharing Program for contingency reserve. Those who participate in a reserve sharing group are better positioned to meet the NERC disturbance control standard because they have access to a deeper and more diverse pool of shared reserve resources. Also, an increase in efficiency is obtained since the shared reserve obligation for the group as a whole is less than the sum of each participant's reserve obligation computed separately.

  By sharing contingency reserve, the participants are entitled to use not only their own "internal" reserve resources, but to call on other participants for assistance if internal reserve does not fully cover a contingency. The reserve sharing process for the NWPP is automated. A manual backup process is in place if communication links are down or the computer system for reserve sharing is not functioning correctly.

  The NWPP is registered as a reserve sharing group (RSG) as provided under the NERC ERO Registration Procedure. Each member of the RSG submits its contingency reserve obligation (CRO) and most severe single contingency (MSSC) to a central computer. The combined member CRO must be larger than the RSG MSSC. If not, then each member's CRO is proportionally increased until this requirement is met. When any RSG member loses generation, they have the right to call upon reserves from the other RSG members as long as they have first committed their own CRO. A request for contingency reserve must be sent within four minutes after the generation loss and the received contingency reserve can only be held for 60 minutes. A request is sent via the member's energy management system to the central computer. The central computer then distributes the request proportionally among members within the RSG. Each member may be called to provide reserve up to its CRO. Critical transmission paths are monitored in this process to ensure SOLs are not exceeded. If a transmission path SOL is exceeded the automated program redistributes the request among RSG members that are delivering reserve along non-congested paths. The appropriate parties continuously monitor the adequacy of the RSG reserve obligation, MSSC, and the deployment of reserve. If a reserve request fails due to various reasons, backup procedures are in place to fully address the requirements.

- Reliability Coordinator

  Peak Reliability (Peak), the Reliability Coordinator for the BC/USA portion of the NWPP area, is responsible for monitoring, advising, and directing action when necessary, in order to preserve the reliability of transmission service between and within the interconnected systems of all Balancing Authorities within the majority of the Western Interconnection. Alberta Electric System Operator (AESO) provides their own Reliability Coordinator services for their operating area and has agreements in place with Peak Reliability as necessary.

STRATEGIC UNDERTAKINGS

- Adequacy Response Team

  The Northwest has developed an Adequacy Response Process whereby a team addresses the area's ability to avoid a power emergency by promoting regional coordination and communications. Essential pieces of that effort include timely analyses of the power situation and communication of that information to all parties including but not limited to utility officials, elected officials and the general public.

- Emergency Response Team (ERT)

  In the fall of 2000, the area developed an Emergency Response Process to address immediate power emergencies. The ERT remains in place and would be utilized in the event of an immediate emergency. The ERT would work with all parties in pursuing options to resolve the emergency including but not limited to load curtailment and or imports of additional power from other areas outside of the Power Pool.

  The NWPP conducts NERC certified training twice a year (fall and spring) including a desk-top simulation associated with the Emergency Response Process.

- Lessons Learned and Recent Power Outages

  The entities within the area that comprise the NWPP continuously review significant outages within the NWPP area and the Western Interconnection. This review is to understand the effects of such outages and obtained 'lessons learned' that may be implemented to prevent any future outage. The goal of the entities is to learn and, when necessary, make changes to assure a reliable interconnection now and into the future.

  With respect to recent power outages, some entities have increased situational awareness while others continue to review outage reports to ascertain lessons learned in order to implement any necessary changes to assure a reliable operation.

  - California ISO Energy Imbalance Market

    Several NWPP members have elected to enter into contractual terms with the California ISO as it related to the California ISO market. These contractual terms allow for energy transfer between the California ISO and the involved NWPP members in 5 and 15-minute interval. The goal of the transfer is to assure more-efficient dispatch in the regional market and to reduce curtailment of renewable energy, by allowing Balancing Authority Areas to export or reduce imports of renewable generation when such generation would otherwise need to be economically dispatched down or manually curtailed.

LARGEST RISK

The largest risk facing Balancing Authorities within the Power Pool area is a significant weather event that would last over a five-day period and have temperatures at 15° F above normal. This type of an event would increase the overall Power Pool load by 4,000 MW. Any additional contingency during such a weather event could cause loss of local load. In addition, human error has a significant impact on the reliability of the Western Interconnection.

CONCLUSIONS

In view of the present overall power conditions, including the forecasted water condition, the area represented by the Power Pool is estimating that it will be able to meet firm loads including the required operating reserve. Should any resources be lost to the area beyond the contingency reserve requirement and or loads are greater than expected as a result of extreme weather, the Power Pool area may have to look to alternatives which may include emergency measures to meet obligations.