

10/23/07

SLICE CUSTOMER RESPONSES AND PROPOSALS
IN RESPONSE TO THE 10/11/07 BPA SLICE WORKSHOP

The following is the response from BPA's customers currently taking requirements service under the Block/Slice contract, as well as Clark PUD, Tacoma Power, and Emerald PUD. It responds to some, but not all, of the issues raised at the 10/11/07 BPA Regional Dialogue Workshop, and are not presented in any priority order. Issues raised in the workshop, which are not addressed in this paper, will be addressed by the customers at a later date.

Given the limited timeframe, customers believe several of the issues raised by BPA will need to be prioritized, so the more significant issues can be addressed first, as to how the future Slice product will be structured.

1. Minimum Amount of Block relative to Slice

BPA Proposal

BPA has proposed setting a minimum amount of Block product available to Block and Slice customers equal to 30% of their overall net requirement. At the 10/11/07 Workshop, BPA stated they would consider lowering the minimum requirement, but were reluctant to remove the minimum entirely.

Slice Customer Response

Customers propose they be allowed to elect the level of Block and Slice needed to serve their load without undue limitations on the product elections. A nominal minimum block amount on the order of 5-10% of the overall Net Requirement placed on BPA would be a reasonable minimum block requirement.

Rationale for Response

Customers are concerned that a minimum block requirement will place an unneeded limitation on the customers' ability to select products that meet their individual needs. Each customer will make a determination of the percentage of block relative to Slice they would elect to contract for based on: 1) their informed review of how best to serve serving their current and future loads and load following needs; 2) their existing and future non-federal resource plans; and 3) an assessment of their willingness to take on the differing risk profiles of the Block product compared to the Slice product. Additionally, limitations on customers' ability to take shaped block service may increase the desire to utilize Slice in their portfolios.

That said, it does seem reasonable to have a nominal minimum level of block, to prevent customers from taking such small amounts of Block power that the effort and overhead overshadow the value delivered.

2. Annual Net Requirement Test

BPA Proposal

Not sure of BPA's proposal at this time, although they have debated the merits of an annual test and a monthly test at earlier meetings.

Slice Customer Response

The current method for testing and ensuring that the requirements portion of Slice is delivered to load on a monthly basis is well understood by the parties and seems to be working well. BPA should, however, include the actual Federal System generation as a determinant to address months when actual generation is less than critical. An annual test could prove comparable or better, but customers and BPA both agree the method for determining the amount delivered to load as part of any annual test, would require modification to the current procedures.

Rationale for Response

The current test sets the monthly requirements amount as the lesser of the customer's share of the critical period generation, the forecasted monthly net requirement, or the actual monthly net requirement. By applying this function on a monthly basis, BPA addresses the issues caused by the differing shapes of the Federal System resource and the customer's load shapes within the year. Months when the Federal System generation is lower than all three of these values have been problematic and needs to be addressed.

Should BPA agree to allow Slice customers to elect a shaped block in conjunction with the Slice product (i.e., either a seasonally-shaped block or block shaped to net requirements), it might facilitate development of an annual requirements test, rather than the existing monthly test. The customers would like to work with BPA to define the appropriate requirements test, based on the decisions BPA makes regarding the availability of shaped block contracts.

3. Grand Coulee/Chief Joseph segregation from Dispatchable System

BPA Proposal

BPA proposes to change their treatment of the Slice Dispatchable System (Grand Coulee, Chief Joe, the Lower Columbia Projects, and the Lower Snake Projects) such that Grand Coulee and

Chief Joseph are modeled separately from the Lower Columbia and Lower Snake Projects for setting daily and hourly scheduling limits.

Slice Customer Response

The customers would like to further explore this concept in a technical setting where the modeling could be reviewed both numerically and conceptually, under different river operations scenarios. The customers would like to schedule such a meeting(s) at the nearest opportunity.

Rationale for Response

The modeling of the Dispatchable System is somewhat complicated. Although the customers feel the process implemented under the current Slice Agreement does a good job, the segregation of Grand Coulee and Chief Joseph, rather than the segregation of the Lower Snake projects as is done now may address certain issues better, such as flow lag times and the operation of the Non-Federal Mid-Columbia projects. One specific area of concern is the pondage flexibility and how this flexibility will be shown with the different Slice limit structure.

It would be helpful to review these issues in a technical forum/meeting designed to explore in more detail the actual methods by which the limits would be set. A technical forum should review the details of the Slice limits under this new structure, under a range of operational scenarios.

4. Sustained Energy Production

BPA Proposal

BPA has indicated a desire to model and implement sustained peaking limits in the Slice system. A slide was shown indicating representative 2, 4, 6, and 8 hour sustained peak limits, although there was no indication if BPA wishes to implement all of these or a subset.

Slice Customer Response

While this topic is important to both BPA and customers, it may not be realistic to expect the modeling of energy production limits will be sufficiently developed and “implementable” within the time allotted. BPA should consider the relative level of importance of this issue compared to the Coulee/Chief Joe segregation, and uncertainty buffers. As this limit would represent an enhancement of the current HLH Maximum Generation limits, time might be better spent on the other issues. If this issue is pursued, BPA should avoid a phalanx of sustained peaking limits of different durations, but consider establishing a sustained energy production limits applied on a rolling basis to a defined length of time.

Rationale for Response

While BPA currently includes a nominal sustained peaking calculation for the Lower Snake and the Lower Columbia projects in their single hour Slice limits currently, and there are HLH production limits, a more appropriate multi-hour sustained peaking limit combined with a proper single hour limit might more closely mirror the actual limitations of the Federal system. The customers would like to work with BPA first to determine the priority of this issue, and then, if needed, discuss further in a technical setting to better understand how these limits would be determined and applied under different operational scenarios.

5. Duty Schedulers / Slice Customer Interface

BPA Proposal

BPA's hydro scheduler will set aside system capacity, on an off-the-top basis, to address the uncertainty of their loads, schedules, and its reserve obligation. BPA has also stated that its realtime marketing staff will be subject to the same operational limits as the Slice customer, including these additional uncertainty buffers.

Slice Customer Response

The uncertainty buffers, as a capacity reduction, do not properly address the concern that Slice schedules can change, within the prescribed limits, up until 30 minutes prior the hour. The Slice customers agree that aligning the BPA marketer and the Slice marketers is a worthy goal and would like to work with BPA to better define how to do that.

Rationale for Response

Schedule uncertainty arises from the very nature of the Slice contract – that the customers are afforded access to the actual system flexibility, which implies that the operational Slice limits are truly reflective of actual system capabilities. Improving tools and communications between BPA and the Slice customer, particularly on a realtime basis, is key. If the Slice limits correctly reflect the actual system flexibility, then the system can be redispatched to accommodate any change in schedule made by the Slice customers without requiring last minute corrective action on the part of BPA. Equally important is ensuring BPA's own marketing staff has not unintentionally scheduled into capacity to which the Slice customers have a contractual right. Under the current contract, proper tools have not been constructed to whether internal BPA activities underlie some of the situations identified during the 10/11/07 workshop.

One way to address these situations would be to set up systems and processes where BPA's hydro duty scheduler communicates the system capabilities to the Slice customers and the BPA

marketer in the same fashion. Under the current system, the hydro scheduler may decide they want additional load on the system and direct the BPA marketer to make sales, only to have the Slice customers make their own sales and submit schedule increases for the same hour. If the duty scheduler simply updated limits and accommodated the changing request within the limits (for both the Slice customers and the BPA marketing staff), it would help better define when periods of system stress require corrective action by the Slice customers or by BPA

Another additional benefit of this procedure could be an increased level of communication regarding the Slice customers' generation forecast for future hours. If the customers could be assured the BPA hydro scheduler was not sharing their marketing activities with the BPA realtime marketer, they would be more inclined to communicate intended schedule changes for future hours to BPA.

6. Discretionary Storage

BPA Proposal

BPA appears ready to remove discretionary storage flexibility outside of the Dispatchable System from the Slice product.

Slice Customer Response

To the extent there is additional flexibility available outside of the Dispatchable System, BPA should make that flexibility available to the customers in a manner reflective of the flexibility actually available – whether on a daily or seasonal basis. BPA should consider alternate means for making seasonal discretionary flexibility available to the Slice customers, including the use of separate flexibility accounts and segregated schedules (separate schedules from the base Slice schedule). For additional intra-day flexibility, BPA has clearly stated they will develop better methods to more quickly update the Slice system limits during real-time. Additional flexibility from outside the dispatchable system should be included in such updates.

Rationale for Response

In the current contract, BPA normally models the projects outside of the Dispatchable System on a fixed basis and will, from time to time, adjust storage bounds to reflect significant amounts of additional flexibility in the system, such as Fall flexibility at Libby or additional flexibility negotiated with Canada. While there have been questions about whether adjusting the bounds properly conveys the actual system limits, making this flexibility available to the Slice customers is clearly the intent of the Slice of System concept. There have been discussions about setting up separate flexibility accounts to address this system flexibility outside of the Dispatchable System. While the separate accounts may be a little bit more cumbersome from an energy

accounting standpoint, it should be easier to define the rules around a special storage arrangement that mirror the seasonal flexibility available in the system.

On a daily basis, these projects are currently included in the Slice limits as fixed generation levels based on preschedule expectations of the generation level. While the projects are typically scheduled and run in this fashion, with little or no change within the day, there are times – typically when the system is stressed – that the projects are re-dispatched in a beneficial manner. The customers have been concerned for some time that the beneficial redispatch in these situations is not necessarily made available to the Slice customers. To the extent better tools to update realtime system limits are developed, they should address the limited, but at times valuable, redispatch rights available outside of the dispatchable system within the current day.

7. Operational Uncertainty Buffers

BPA Proposal

BPA proposes to limit the system capacity to address schedule and load uncertainty associated with a myriad of conditions (PAC capacity contract, weather, non-federal resources (wind, etc.)). The magnitude of these buffers will be determined by the Hydro Duty Schedulers as a Federal Operating Decision, based on their best judgment of how much of a “buffer” is needed.

Slice Customer Response

Some of the items previously discussed will address schedule uncertainty. These include the improved modeling of the system limits (e.g., through the use of sustained peaking limits and/or the segregation of Grand Coulee/Chief Joe) and updates to the Slice Application to allow for timely changes of realtime system limits. Also, the closer alignment of the Duty Scheduler/Slice Customer interface should pave the way for better information flow to BPA’s Hydro Duty Scheduler regarding the Slice Customers’ anticipated schedule changes for future hours. To the extent, however, that the BPA Duty Scheduler still requires additional capacity to address uncertainty, the customers would like to explore the best way to facilitate a “Slice capacity buy-back” from Slice participants.

Rationale for Response

The notion of uncertainty buffers has been raised by BPA for some time, but the customers request that BPA provide some specific examples of why ‘buffering’ is needed, and the capacity requirements for each component, rather than simply reducing the overall capacity of the system. Developing tools to ensure the Slice limits are reflective of the system capability and operational constraints/limitations would go a long way to addressing BPA’s desire to ensure schedule changes are within the capability of the system. To the extent the Slice customer schedule

changes are within the system capability and operating limits, the combined request will be able to be met by the federal system without extraordinary measures being taken by BPA.

In order to assist BPA's scheduling staff, the Slice customers believe it would be appropriate to increase the amount of information communicated during real-time operations. Specifically, BPA should work to facilitate customer information that provides an indication of expected schedule changes on future hours. Customers remain concerned about providing marketing information to BPA that might be shared with BPA's own marketing staff. Such information flow would be detrimental to the customer's marketing activities and potentially anti-competitive in nature. If confidentiality can be assured, then customers believe that real-time communication and clarity of Slice schedule changes will provide better projections to BPA.

Finally, reserving capacity off-the-top to address uncertainty raises a couple of significant issues. One is the mechanism by which such additional capacity would be utilized. Unlike control area reserves, which have a reasonably clear set of events that triggers the use of the set aside capacity, this uncertainty buffer does not. The events or situations that allow use of the set-aside capacity would need to be defined, and allowance made for Slice customers to activate the use of the capacity if such events happen on their systems. Alternately, if there are no mechanisms to beneficially use the capacity, the uncertainty buffers will only serve to de-value the system by making capacity unavailable for use by any party.

8. Metrics for Slice Limits

BPA Proposal

Not addressed at the 10/11/07 meeting.

Slice Customer Response

The customers agree with BPA's previously stated intent to define operational metrics that are designed to clearly identify whether the Slice limits are being set in manner reflective of the overall Federal System limits. The customers recommend additional review to determine the best metrics to use going forward.

Rationale for Response

During the Slice review, BPA indicated a number of concerns with the contract and the operational limits based on a relatively small set of anecdotal evidence. The review was difficult due to the lack of comprehensive data by which BPA and the customers could derive some consensus regarding whether the contract was operating well at an operational level or not. BPA

and the customers should set down metrics by which future determinations can be made about the adequacy of the limits in an informed environment.