Southwest Power Pool

CAWG MEETING
Sept. 27, 2006
Hyatt Regency DFW
Dallas, TX
11:00 – 5:00 pm

AGENDA

1.	Introductions	11:00 - 11:10
2.	White Paper Discussion for Presentation to RTWG Discussions lead by Larry Holloway	11:10 –12:00
3.	Lunch Break	12:00 – 12:45
4.	White Paper Discussion for Presentation to RTWG (cont.) Discussions lead by Larry Holloway	12:45 – 2:30
5.	15 minute break	2:30 – 2:45
5.	White Paper Discussion for Presentation to RTWG (cont.) Discussions lead by Larry Holloway	2:45 – 5:00

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CAWG WHITE PAPER ON ATTACHMENT Z

I. Background

Over the past year, the CAWG meetings have focused on Attachment Z from the perspective of what changes are needed to help promote investment in transmission upgrades that reduce congestion and result in lower cost, wholesale electricity supply to load-serving entities and ultimately to end-use consumers. For purposes of this white paper, transmission facilities built to reduce congestion and lower the cost of electricity supply are called "Economic Upgrades."[1] The key component of Attachment Z is the ability of an entity that has been directly assigned the costs of a transmission upgrade ("Assignee" to the "Directly Assigned Network Upgrade") to receive revenue credits from additional use of these upgraded transmission facilities. Moreover, because it can be difficult and very costly on a per unit basis to construct small additions to the transfer capability of the transmission system, Attachment Z was initially designed to allow transmission customers not needing all of the capacity of the Directly Assigned Network Upgrade to recover a portion of that cost[2] through revenue credits.

[The word assignee is capitalized in the paper indicating it is a defined term. Assignee is not at this time a defined term in the SPP tariff, but Project Sponsor is: 1.36a One or more entities that voluntarily agree to bear the cost of an Economic Upgrade. Transmission Customer is also a defined term 1.45 Any Eligible Customer (or its Designated Agent) that (i) executes a Service Agreement, or (ii) requests in writing that the Transmission Provider file with the Commission, a proposed unexecuted Service Agreement to receive transmission service under Part II of the Tariff. This term is used in the Part I Common Service Provisions to include customers receiving transmission service under Part II and Part III of this Tariff.

Based on these definitions the Project Sponsor is NOT taking service and is NOT a Transmission Customer. The Project Sponsor and the Transmission Customer terms should be used separately for clarity. In the paper the word assignee should not be capitalized]

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A. Relationship of Revenue Credits to Investment in Economic Upgrades

In making a decision concerning investment in transmission facilities or accepting the direct assignment of the cost of upgrades to improve the cost of wholesale electricity supply,

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[1] The CAWG recognizes that transmission upgrades that are built to meet reliability standards can also reduce congestion and lower electricity supply costs, but these upgrades are required irrespective of their economic benefit and are not called "economic upgrades."

[2] The portion of cost eligible for recovery is the amount directly assigned to the transmission customer in excess of the stated SPP rate.

Transmission Customers ~~vertically integrated utilities~~ would be comparing these costs to a stream of benefits they expect to receive from the expanded transmission capacity. These benefits could be in the form of either: 1) direct load benefits in the form of lower-cost purchases of power; or 2) direct generator benefits in the form of expanded sales of power. ~~In the context of vertically integrated utilities,~~ Bboth of these forms of benefits would reduce the cost of electricity supply for end-users.

(I see no reason to differentiate between vertically integrated utilities and other LSEs.)

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Attachment Z provides an additional stream of revenues to be added to the cost/benefit calculation – revenue credits from others using the capacity of the facilities provided by the Directly Assigned Network Upgrade. Having this additional stream of revenues available to the calculus of such decisions is critical to providing correct price signals and incentives for those considering investments in Economic Upgrades to the SPP transmission system.~~.~~

B. Various Forms of Investment in Economic Upgrades

Economic Upgrades to the transmission system can be classified as associated with either short-term (hourly, daily, weekly or monthly), mid-term (yearly up to 5 years) or long-term (5 years or longer) transactions for electricity supply.

Five years is used as a separation between long-term and mid-term because contracts for power supply that are 5 years or longer are eligible for regional cost allocation for a new or changed designated resources to serve load. Even in the case of long-term contracts, if the cost of the upgrades needed to deliver power from a new or changed designated resource exceeds $180,000/ MW, the excess would not be eligible for regional cost allocation and would be considered a form of investment in an Economic Upgrade and the Assignee would be eligible to receive revenue credits on that directly assigned cost.

To obtain transmission service for mid-term contracts, a transmission customer would either be subject to “or” pricing if the transmission service requested is point-to-point (PTP), or to “and” pricing if the transmission customer is a network service customer not wanting to take additional ~~point-to-point~~PTP transmission service from the generation source. In either case, if the transmission customer pays more than the SPP transmission rate, as the Assignee, the transmission customer would be eligible to receive revenue credits on that directly assigned cost.

The CAWG was concerned about how those making an investment in Economic Upgrades for purposes of short-term transactions would be able to protect that investment. At one of the CAWG meetings Robert Pennybaker from AEP West made a presentation regarding the flexibility a transmission customer taking long-term ~~point-to-point~~PTP transmission service would have under the SPP tariff.[3] In essence, even when load-serving entities are evaluating electricity cost savings associated with short-term transactions, in order to protect their investments in transmission, they may want to reserve firm ~~point-to-point~~PTP transmission service for one-year or longer.[4]

The CAWG also recognizes that investors in Economic Upgrades may not want to explicitly take ~~point-to-point~~PTP transmission service, but instead may simply want to sponsor the upgrade and allow the SPP Energy Imbalance Market to provide the benefits through lower load costs or higher generation sales.

C. Structure of the Attachment Z White Paper

The remainder of this white paper is divided into two sections: Section II - Recommendation of the CAWG for changes to Attachment Z; and Section III ~~-~~ – Alternative Resolutions for Unresolved Issues related to Attachment Z. In the recommendation Section II, a brief explanation of the reason for the recommendation will be presented. In ~~the issues~~ Section III, details of discussion related to ~~both sides of the issue~~ proposed alternative resolutions are presented.

II. Recommendations of the CAWG for Changes to Attachment Z

A. Project Sponsors – Not ~~Tak~~Requesting Transmission Service ~~From~~ With the Directly Assigned Network Upgrade.

Project Sponsors are defined as those entities that request transmission upgrades be built, are willing to have the costs of the transmission upgrades directly assigned to them, but do not request transmission service to be taken from the Directly Assigned Network Upgrade. Introducing the concept of a Project Sponsor not taking transmission service from the Directly

[3] That presentation is included as an attachment to this white paper.

[4] Under proposed Order 888 reform, the FERC is requiring at least a 5 year reservation in order to be eligible for roll-over rights. If this change is implemented, it may be necessary to protect an investment in an economic upgrade designed for short-term electricity supply cost savings for the transmission customer to request a 5-year reservation for point-to-point transmission service.

Assigned Network Upgrade requires some changes to be made to Attachment Z as it was originally drafted to provide an aggregate study process and revenue credits for ~~t~~Transmission ~~c~~Customers being directly assigned upgrade costs when such upgrades are needed in order to grant their requests for transmission service.

1. Absent any corresponding request for transmission service, ~~S~~should Project Sponsors ~~that have not requested transmission service~~ be allowed to request and be directly assigned the costs of network upgrades? **CAWG Recommendation: YES.** This implies that Attachment Z should be divided into two distinct parts:

   Part I: Aggregated Study Process for Transmission Service Requests.

   Part II: Revenue Credits from Subsequent Transmission Use of a Directly Assigned Network Upgrade for Assignees (both Transmission Customers and Project Sponsors).~~.~~

2. Do any changes need to be made to Attachment Z regarding the aggregate study process? **CAWG Recommendation: YES**, there are several problems with the current aggregate study process that are listed below. Possible ~~solu~~resolutions to these problems are presented in Section III.

   a. With respect to the aggregate study process, ~~T~~the current version of Attachment Z only refers to requests for transmission service. This would exclude Project Sponsors that are not requesting transmission service from participation in the aggregate study process as a way to determine whether or not there are transmission service requests that would benefit from the upgrade and thereby share in the cost of the upgrade.
   b. A concern was express about speculative projects being submitted into the aggregate study process by ~~p~~Project ~~s~~Sponsors. Whether speculative projects are submitted in the form of transmission service requests or by Project Sponsors, the CAWG recognizes that such requests tend to bog down the aggregate study process and there appears to be a need for a separate process for evaluating speculative or competing projects, e.g., transmission ~~right~~ service for bids from competing resources. However, studying these projects separately may lead to erroneous conclusions.
   c. The aggregate study process has required a significantly long time to reach a conclusion as restudy is required every time an additional transmission service request decides not to go forward.

3. Should the direction of the impact of subsequent requests for transmission service matter in determining the eligibility of the Assignee of the Directly Assigned Network Upgrade ~~for~~ to receive revenue credits? **CAWG Recommendation: YES.**

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when the original request resulting in Directly Assigned Network Upgrade cost was for transmission service.

a. If the original request is from a transmission customer, then the impact from subsequent requests for transmission service must be in the same direction as the original request for transmission service in order for the Assignee to be eligible to receive revenue credits..

b. ~~If the original request is from~~ For the case where a Project Sponsor did not request ~~taking~~ transmission service ~~with~~ at the time of submitting the request that resulted in the assignment of costs for Directly Assigned Network ~~u~~Upgrade, the CAWG did not reach agreement on whether or not the direction of the subsequent request is important. **See section III of this white paper for further discussion.** ~~n the Project Sponsor should be required to specify the direction in which the upgrade is intended to increase the transfer capability of the transmission system.~~

c. As with the current version of Attachment Z, ~~T~~this recommendation does not apply to the category 3 power devises.

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No. the question should be could the new service be provided without the upgrade. If it could then no revenue credits should be received. If it could not then revenue credits should be received by the Assignees. The over riding principle should be whether the upgrade makes it possible to provided the requested service.

4. Should Project Sponsors that are not requesting transmission service ~~for the use of the~~ with the Directly Assigned Network Upgrade be allowed to subsequently request transmission service and receive revenue credits? **CAWG Recommendation: YES**, this should be a viable alternative. In this situation, the Project Sponsor would receive revenue credits from the payments received by SPP for the Project Sponsor's subsequent request for transmission service.

   a. Short-term PTP transmission service can be used by the Project Sponsor for bilateral transactions that use the Directly Assigned Network Upgrade.
   b. Long-term PTP transmission service can also be requested by the Project Sponsor at a subsequent time that uses the Directly Assigned Network Upgrade. For example, a later request for long-term PTP transmission service could involve a new or changed DR.
   c. A Project Sponsor that is a NITS customer may subsequently request a new DNR that uses the Directly Assigned Network Upgrade.

5. Should Project Sponsors not ~~tak~~requesting transmission service with the Directly Assigned Network Upgrade be allowed to make a lump sum payment to the TO for the Network Upgrade? **CAWG Recommendation: YES**, the CAWG understands that, whatever the form of the payment (e.g., revenue requirements over the asset life or a lump sum payment), a multi-party agreement will be required, involving the

Project Sponsor(s), the Transmission Owner(s) and the SPP. The CAWG recommends that the SPP include standard forms for such agreements in its ~~Businesss~~Business Practices.~~however, the SPP should offer a standard payment such as revenue requirements over the asset life, and any alternative payment method should be a contractual arrangement negotiated between the Project Sponsor and the TO. Issue – Gene Anderson also wants a standard for the lump sum payment (see next section).~~

6. Should ~~there be~~ Attachment Z continue to place a limit on the revenue credits for which the Project Sponsor is eligible? **CAWG Recommendation: YES**

   a. The current form of Attachment Z limits revenue credits to payments for that portion of directly assigned costs above ~~that exceed~~ the standard rates for transmission service; e.g., either through "or" pricing for PTP service or through "and" pricing for network integrated transmission service (NITS) . A Project Sponsor would be entitled to receive the full amount of the Directly Assigned Network Upgrade in revenue credits.

   b. When a limit is placed on the amount of revenue credits received, the tariff must also allow for accumulation of the difference between that limit and revenue credits actually received, including interest. If this occurs, it must be clear that this accumulated amount is still a limit, not an amount due to the project sponsor at the end of some period of time.

   ~~b.~~c. The tariff should also include a limit on the time over which revenue credits can be received. This length of this period of time is an unresolved issue that is discussed in Section III. ~~the next section. **Charles Locke – 30 year time period / Gene Anderson – service life.**~~

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B. Subsequent Transmission Use of Directly Assigned Network Upgrades in the Form of Requests for New of Changed Designated Resources.

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~~1.Should s~~Subsequent transmission requests for new or changed Designated Resources (DRs) that qualify for Base Plan Funding under Attachment J and that impact/use Directly Assigned Network Upgrades provide ~~some form of payment such as~~ revenue credits to the original Assignee ~~Project Sponsors~~in the current version of Attachment Z.~~?~~ **~~CAWG Recommendation: YES.~~** Transmission requests involving DRs that qualify for Base Plan Funding include both:

a) NITS requests for new or changed DNRs; and

b) PTP requests for new DRs.

However, the current version of Attachment Z does not separate out requests for new or changed DRs from other transmission requests that impact Directly Assigned Network Resources.

1. In revisions to Attachment Z, should subsequent transmission requests involving new or changed DRs be set out as a separate category for making payments to Assignees of Directly Assigned Network Upgrades? **CAWG Recommendation: YES.** This subsequent use of transmission directly involves the application of Attachment J with the potential for Base Plan Funding being used for revenue credits, and therefore needs to be kept distinct from other forms of transmission service requests that impact Directly Assigned Network Upgrades. More specifically, Attachment J requires an assignment of costs for upgrades to requests for a new or changed DR, and the manner in which this cost assignment applies to the requestor of the new or changed DR is unique to Attachment J.

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2. For purposes of Attachment J determinations, what costs from Directly Assigned Network Upgrades should be included as attributable to subsequent requests for new or changed DRs? **CAWG Recommendation:** The costs from Directly Assigned Network Upgrades that should be attributable to subsequent requests for DRs should include:

(a) * (b)

   a. The original cost of the Directly Assigned Network Upgrades. Whether or not ~~minus straight-line~~ accumulated depreciation over the period of time that these upgrades were in service should be subtracted from the original cost of the Directly Assigned Network Upgrade is an unresolved issue that is discussed in Section III .. ~~The CAWG recommends using straight-line depreciation as the request for a new or changed DR may occur several years after the date at which the Directly Assigned Network Upgrade is made, and there needs to be some mechanism to account for the age of the facilities in order that subsequent users are not overcharged for their use of older facilities. Straight-line depreciation is the most straight-forward method, and does not front-load depreciation costs as would be the case for depreciation associated with levelized fixed charge rates.~~
   b. The MW impact of the new or changed DR ~~in the direction of the increased transfer capacity~~ associated with the Directly Assigned Network Upgrade as a percent of either ~~(see Appendix A for examples of these calculations)~~:
      (1) The incremental MW transfer capacity created by the upgrade in the direction of the increased transfer capability associated with the Directly Assigned Network Upgrade; or
      (2) The sum of incremental MW impacts on the upgrade in the direction of the increased transfer capability associated with the Directly Assigned Network Upgrade from ~~subsequent~~ new transmission service, where new transmission service includes the transmission service of the original Assignee plus any

subsequent transmission service that impacts the Directly Assigned Network Upgrade in the same direction as that of the original Assignee.

3. Under what circumstances should the denominator in the determination of the percent MW impact of a new or changed DR be determined as: (1) incremental MW transfer capacity; versus (2) incremental MW impacts from subsequent transmission service?

CAWG Recommendation: (See Appendix A for examples of these calculations.)

a. If the Directly Assigned Network Upgrade cost are assigned to a Project Sponsor that does not involve a transmission service request, then the denominator used in the determination of the percent of MW impact should be the incremental MW transfer capacity ~~created in the direction of the increased transfer capability~~ associated with the Directly Assigned Network Upgrade; and
b. If the Directly Assigned Network Upgrade cost go to a Transmission Customer and involve a transmission service request, then the denominator used in the determination of the percent of MW impact should be the sum of incremental MW impacts in the direction of the increased transfer capability associated with the Directly Assigned Network Upgrade from ~~subsequent~~ new transmission service.

The current Attachment Z ~~uses~~ applies (a) for all subsequent ~~point-to-point~~PTP use of the Directly Assigned Network Upgrade and (b) for all subsequent network service use. However, the distinction should not be based on whether subsequent use is for ~~point-to-point~~PTP or network service use, rather the distinction should be based on whether or not, at the time of the original request, the ~~original entity being directly assigned~~ Assignee of the costs of the Directly Assigned ~~n~~Network ~~u~~Upgrade ~~is taking~~ requested and is now receiving transmission service from the Directly Assigned Network Upgrade or not. If the ~~original entity~~ Assignee did not take transmission service at the time of the original request, then it is impossible for the percent impact to be based on a share of the total incremental MW impacts from transmission service being taken from the upgrade as the Project Sponsor is not taking any transmission service and would have a zero impact. Using the incremental MW transfer capacity created by the upgrade is an alternative calculation that gives the same result as incremental MW impacts from transmission service sold when the total quantity of incremental MW impacts from transmission service sold are equal to the transfer capacity created by the transmission upgrade.

The primary reason for using percent of MW impacts from transmission service sold is to put all subsequent transmission service use of the upgrade on an equal basis

with prior transmission service uses of that same upgrade. This will help to encourage potential co-sponsors not to wait until after the upgrade is completed to request desired transmission service in hopes of obtaining such service at a lower cost than if they had co-sponsored the upgrade.

4. Should the costs from Directly Assigned Network Upgrades attributable to new or changed DRs be subject to the safe-harbor provision of Attachment J? **CAWG Recommendation: YES.** The issue here is whether or not a request for long-term PTP service involving a DR should be directly assigned any costs associated with transmission facilities that are already in place. In this context, keep in mind that any request for DRs that does not meet either the safe-harbor provision or the conditions of Attachment J and does not receive a waiver can be directly assigned costs associated with upgrades needed to grant the request. In its approval of Attachment Z, the FERC determined that Network Service that impacts the Directly Assigned Network Upgrade should pay revenue credits to the Assignee of the costs of the Directly Assigned Network Upgrade. Clearly such an impact from a NITS customer could occur through a request for a new or changed DNR. The CAWG recommendation is that new or changed DRs requested through PTP service should be treated in a comparable manner.

   a. The $180,000/MW cap should apply to all requests for new or changed DRs, whether through NITS or PTP transmission service.
   b. The cost from already constructed Directly Assigned Network Upgrades should be included along with the costs of any additional upgrades needed to grant this transmission service.
   c. If the $180,000/MW cap is exceeded and a waiver is not granted, then the amount of the excess should be distributed in proportion to the costs of each ~~project~~ transmission upgrade assigned to the DR request, including both Directly Assigned Network Upgrades and any new upgrades required.

5. Should "higher of" pricing apply to subsequent requests for a new or changed DR through PTP service? **CAWG Recommendation: YES.** If the costs directly assigned to a transmission customer requesting a DR through PTP service exceed the PTP rate, then that customer should be responsible for those costs.

   a. Applying Attachment J in conjunction with Attachment Z determines the amount of cost going into Base Plan Funding and the amount of costs (if any) that would be directly assignable to the TC for PTP service..

b. Any cost directly assignable to the PTP TC would then be compared to the tariffed rate for PTP service by applying usual "or" pricing procedures.
   - Customer will always pay at least the PTP rate.
   - If costs (above those included in Base Plan funding) are lower than the PTP rate, then the TC pays the PTP rate.
   - If costs (above those included in Base Plan funding) are higher than the PTP rate, then the TC pays the PTP rate plus an excess above that rate.

6. What ~~are~~ should be the dollar flows related to subsequent DR through PTP service using a Directly Assigned Network Upgrade? **CAWG Re~~sponse~~commendations:**

See Appendix B for examples of all the possibilities listed below.

~~Project Sponsors/Transmission Customer ("PJ/TC")~~ The Assignee continues to pay for the cost of the Directly Assigned Network Upgrade.

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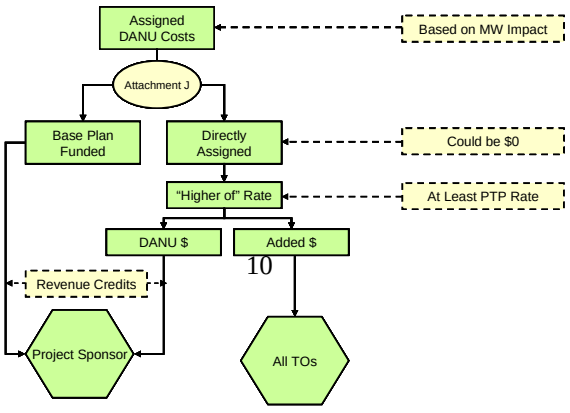
- ~~Depreciated~~ Cost of Directly Assigned Network Upgrades is assigned to subsequent PTP TC based on MW impacts.
- Revenues from subsequent PTP DR Service
  - Rates via Base Plan Funding for Directly Assigned Network Upgrades go to SPP and are distributed to the Assignee~~PS/TC~~. If Base Plan Funding covers all the costs, then the ~~PS/TC~~ Assignee is not entitled to any additional revenue credits from the subsequent transmission customer. The subsequent transmission customer pays the PTP rate and the revenues are distributed to transmission owners.
  - If Base Plan Funding does not cover all the upgrade costs, then the subsequent transmission customer is directly assigned whatever costs are not covered, and the PTP "higher of" rate applies.
    - If the "higher of" rate is the PTP rate, then that portion of the PTP rate that covers transmission upgrade costs will be paid back to the ~~PS/TC~~Assignee's share of upgrade costs not covered by Base Plan Funding. The remaining revenues are distributed to transmission owners.
    - If the "higher of" rate is above the PTP rate, then all of the "higher of" rate is applied to cover transmission upgrade costs which include the ~~PS/TC~~Assignee's share of upgrade costs not covered by Base Plan Funding. There are no remaining revenues to distribute to transmission owners.

Diagram of Dollar Flows for New or Changed DR Through PTP Service



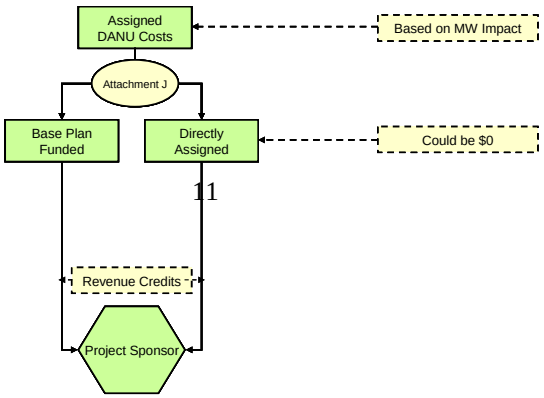
7. Should any change to Attachment J be made concerning ~~Can~~ a DNR request by a NITS customer that result in a form of "and" pricing? **CAWG Recommendation: ~~YES~~NO.** Currently, under Attachment J, NITS customers requesting new or changed DNRs are subject to direct assignments of transmission upgrade costs as indicated below.

   - When the assigned costs of the upgrades exceed the safe harbor limit of $180,000/MW a portion of the assigned costs of the upgrade above $180,000/MW are directly assigned to the NITS customer, unless a waiver is granted.
   - To qualify ~~F~~for Base Plan funding, the DNR request must equal or exceed 5 years and total capacity cannot exceed 125% of forecasted peak demand. Otherwise, the NITS customer must either receive a waiver or pay for ~~the entire~~ at least a portion of the cost of upgrades required to meet its DNR request.

8. What ~~are~~ should be the dollar flows related to subsequent DNR through NITS service using a Directly Assigned Network Upgrade? **CAWG Recommendation~~sponse~~:** See Appendix ~~B~~ C for examples of all the possibilities listed below.

   - ~~PS/TC~~ Assignee continues to pay TO for the cost of the Directly Assigned Network Upgrade.
   - Cost of Directly Assigned Network Upgrades are assigned to subsequent NITS customer based on MW impacts.
   - Revenues from subsequent NITS DNR Service:
     - Rate via Base Plan Funding for Directly Assigned Network Upgrades go to SPP and are distributed to ~~PS/TC~~the Assignee.
     - Any Excess above Base Plan Funding paid by NITS customer also goes to ~~PS/TC~~the Assignee.

Diagram of Dollar Flows for New or Changed DNR through NITS



C. Subsequent Transmission Use of Directly Assigned Network Upgrades by New or Changed System Load.

In the previous section subsequent use of Directly Assigned Network Upgrades associated with new or changed Designated Resources was discussed separately from other uses because these subsequent transmission requests are eligible for Base Plan Funding which provides a source of revenues to pay the revenue credits. In addition, there are reliability upgrades included in the SPP transmission plan that are eligible for either Base Plan Funding or to be included in the transmission owner's zonal rate. These upgrades do not involve subsequent reqursts for transmission service, but are associated with reliably meeting system load ~~with~~ from currently approved ~~designated resource~~DRs. Since upgrades needed to support approved new or changed ~~designated resource~~DRs are already taken into account through the transmission request process, the purpose of the SPP transmission plan is to ensure that the transmission system can continue to provide reliable transmission service to system load. In this context, new or changed system load refers to situations where load growth has occurred in such a way that ~~differently than expected and~~ additional upgrades are needed to meet ERO standards and SPP reliability criteria. In addition, Transmission Owners may have planning standards more stringent than ERO standards and SPP criteria, in which case upgrades may be required from new or changed load that results in associated costs being rolled into the ~~t~~Transmission ~~o~~Owner's zonal rate. Thus, either through Base Pland Funding or through Transmission Owners' zonal rates, there is a source of revenue to provide Assignees of Directly Assigned Network Upgrades costs with revenue credits, where appropriate.

1. Should Directly Assigned Network Upgrades that displace reliability upgrades that would otherwise be needed result in reduced costs for the Assignees of the costs of the Directly Assigned Network Upgrades ~~Project Sponsors/ Transmission Customers ("PSs/TCs")~~?

CAWG Recommendation: YES, to the extent that the reliability upgrades appear in the SPP Board approved plan at the time that the ~~Project Sponsors submit their~~ request for the Directly Assigned Network Upgrades is approved. The cost of these reliability upgrades should be removed from the costs assigned to the Project Sponsor. This is consistent with the current Attachment J that requires costs of reliability upgrades that are deferred by economic upgrades not be directly assigned to the Project Sponsor, but instead are Base Plan funded.

2. Should subsequent use of Directly Assigned Network Upgrades by "New Load" of a Transmission Customer result in revenue credits to ~~PSs/TCs~~ the Assignees of the costs of the Directly Assigned Network Upgrades? **CAWG Recommendation: YES.** It appears from the FERC Order on Attachment Z that if "New Load" associated with NITS impacts the Directly Assigned Network Upgrade, the ~~PS/TC~~ Assignee should receive revenue credits. A discussion of how SPP should make the necessary calculations to provide the revenue credits is included in Section III.
   a. Clearly the addition of a large, new load would qualify, but there is no designated/arbitrary megawatt floor in the tariff.
   b. In addition, it would appear that it shouldn't make any difference whether there is only one customer or multiple customers that account for the new load.
   c. In addition, it would appear that it shouldn't make any difference whether the new load comes from existing customers or new customers.

D. Subsequent Transmission Use of Directly Assigned Network Upgrades by New ~~Point-To-Point~~PTP Transmission Service Other Than New or Changed Designated Resource.

The previous two sections dealt with subsequent use of Directly Assigned Network Upgrades associated with transmission requests for serving native load (i.e., new~~/-or~~ changed designated resources o~~f~~r new~~/-or~~ changed loads). In addition to these requests for transmission service to serve load from designated resources, there may be requests for ~~point-to-point~~PTP transmission service not related directly to serving load from designated resources. For purposes of this portion of the white paper, these subsequent requests for ~~point-to-point~~PTP transmission service are separated between short-term (less than one year) and long-term (more than one year).

Short-term requests for ~~point-to-point~~PTP transmission service are simply accepted or rejected by the SPP based on available transmission capability. There is no question of upgrades to meet these requests. This is not true of requests for long-term, ~~point-to-point~~PTP transmission

service, where the length of term may require an upgrade in order to meet the request. It appears that upgrades could also be required for mid-term (over 1 year, but less than 5 years) requests for ~~point-to-point~~PTP transmission service even if the FERC implements the recommendation to limit roll-over rights to requests of 5 years ~~are~~ or greater. At this time, it does not appear that limiting roll-over rights to requests involving more than 5 years would impact the following CAWG recommendations.

~~1.Should~~ The current form of Attachment Z requires subsequent short-term PTP requests for transmission that impact Directly Assigned Network Upgrades to provide revenue credits to the entities that have been directly assigned these costs. The requirements for receiving such revenue credits and the form of these revenue credits ~~is~~ are as follows:~~? CAWG Recommendation: YES.~~

- Must impact the Directly Assigned Network Upgrades involved in the same direction as the initial overload.
- This MW impact is to be recalculated each month.
- The ~~basis~~ calculation for such revenue credits ~~should be the same as is~~ included in the existing Attachment Z ~~=~~is (MW impact)*(Applicable PTP rate)
  - MW Impact = (% Distribution Factor)*(MW Transmission Service)
  - PTP rate = the applicable rate paid by the subsequent TC.

1. Should any changes be made to Attachment Z regarding the calculation of revenue ~~credit~~credit from subsequent short-term PTP requests for transmission that impact Directly Assigned Network Upgrades? **CAWG Recommendation: For the most part NO**. However, a concern has been raised about:

   a) the requirement for the MW impact to be in the same direction as the ~~intial~~initial overload when the request for the upgrade comes from a Project Sponsor rather than a request for transmission service; and

   b) the requirement to recalculate the MW impact each month.

   Both of these issues are discussed in Section III.

2. Should any changes be made to Attachment Z regarding the calculation of revenue credits from subsequent long-term PTP requests for transmission that impact Directly Assigned Network Upgrades ~~provide revenue credits to the entities that have been directly assigned these costs~~? **CAWG Recommendation: YES.** It should be clear in

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Attachment Z that requests for long-term PTP service with and without a new or changed DR should be treated on a comparable basis.

a. A request for PTP service that does not included a new or changed DR should be include a direct assignment of costs from the Directly Assigned Network Upgrade that is then included in SPP's calculation of "or"/"higher of" pricing for that request. **While comparability is a strong argument in favor of this recommendation, there is another side to this issue that is discussed in Section III.**

b. The calculations in the current Attachment Z require the SPP to recalculate the MW impact on the Directly Assigned Network Upgrade for all PTP transmission service on a monthly basis. This is not consistent with the calculations made for long-term PTP service associated with a request for a new DR, where a one-time calculation of impact is made to determine the costs from the Directly Assigned Network Upgrade that are, in essence, re-assigned to the subsequent request. In order to be consistent, the calculation of MW impacts for long-term PTP service should be made one time, whether or not the request involves a new or changed DR..

~~•Must impact the Directly Assigned Network Upgrades involved in the same direction as the initial overload.~~

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E. Revenue Credit Streams Versus Lump-Sum Credits

1. Should ~~the SPP~~ Attachment Z consider a lump-sum credit to the Project Sponsor as an option in lieu of revenue credits when a portion of the revenue credits are coming from Base Plan Funding? **CAWG Recommendations:** Based on the following situations.

NO when:

a. Project Sponsor is making payments for the Directly Assigned Network Upgrade ~~using the SPP standard payment~~ over the asset life (e.g., 30 years). For example, assume ~~A~~ a new DNR is approved and a portion of the cost of the Directly Assigned Network Upgrade is Base Plan Funded. The dollar flows for the revenue credit case are:
   - Project Sponsor pays SPP monthly payment for Directly Assigned Network Upgrade costs. SPP transfers payment to Transmission Owner.

- SPP bills appropriate transmission customers for rates associated with new DNR. A portion of the revenues collected go to Project Sponsor.
- In net, SPP credits the Project Sponsor's bill for revenues thereby reducing the Project Sponsor's net payment. SPP makes up the difference to the Transmission Owner from revenues received in rates for new DNR.

In effect, the Project Sponsor has received a lump-sum reduction to what is owed the SPP. But, this is different from receiving a lump-sum credit that would involve a one-time cash payment from SPP to the Project Sponsor.

b. The Network Transmission customer funds the Directly Assigned Network Upgrade when requesting a new DNR that exceeds the safe harbor limit of $180,000 per MW. The payment for the excess over the safe-harbor limit is made over the SPP standard payment period (e.g., 30 years). For example, assume ~~A~~ a new DNR is approved and a portion of the cost of the Directly Assigned Network Upgrade is Base Plan Funded. The dollar flows for the revenue credit case are identical to the previous example.

YES, when:

a. The Project Sponsor funds the Directly Assigned Network Upgrade by paying the Transmission Owner the cost of the upgrade upfront. For example, assume ~~A~~ a new DNR is approved and a portion of the cost of the Directly Assigned Network Upgrade is Base Plan Funded. The dollar flows for the revenue credit case are:
   - Project Sponsor pays SPP a monthly fee for maintenance of the Directly Assigned Network Upgrade. SPP transfer payment to the Transmission Owner.
   - SPP bills appropriate transmission customers for rates associated with new DNR. ~~A~~ The appropriate portion of the revenues collected goes to the Project Sponsor.
   - In net, SPP credits the Project Sponsor's bill for the revenues, thereby resulting in a net cash payment to the Project Sponsor. ~~SPP makes up the difference to the Transmission Owner from revenues received in rates for the new DNR.~~

   Alternatively, the dollar flows for the lump-sum credit case are as follows:
   - SPP collects from ~~goes to~~ the Transmission Owner ~~and collects~~ a lump-sum amount for portion of the Directly Assigned Network Upgrade that is included in Base Plan Funding.
   - SPP transfers this lump sum payment to the Project Sponsor and the amount of revenue credits for which the Project Sponsor is eligible is reduced.
   - SPP bills appropriate transmission customers for rates associated with new DNR.
   - Transmission Owner receives revenues from SPP for lump-sum payment.
   - The Project Sponsor continues to make monthly payments for maintenance.

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b. The Transmission Customer funds the Directly Assigned Network Upgrade by paying the Transmission Owner the cost of the upgrade through "higher of" pricing over the term of the transmission service contract. For example, assume ~~A~~ a new DNR is approved and a portion of the cost of the Directly Assigned Network Upgrade is Base Plan Funded.

1) If the term of the transmission service contract is completed and the TC is no longer taking transmission service, the dollar flows are the same as in the previous case except that if the TC is no longer taking transmission service, there are no maintenance fees.
2) If the initial term of the transmission service contract is completed, but the TC continues to take transmission service, the dollar flows for the revenue credit case are as follows:
   - The customer pays the PTP rate and receives back in revenue credits a portion of the rate based on the MW impact on the Directly Assigned Network Facilities. The remaining revenues are distributed among TOs.
   - SPP bills appropriate transmission customers for rates associated with new DNR. A portion of the revenues collected go as a credit to the Transmission Customer who has funded the Directly Assigned Network Upgrade.
   - The sum of revenue credits received by the Transmission Customer may or may not exceed the PTP rate.

   Alternatively, the ~~dollared~~dollar flows for the lump-sum credit case are as follows:
   - ~~the~~ SPP ~~goes to~~ collects from the Transmission Owner ~~and collects~~ a lump-sum amount for the portion of the Directly Assigned Network Upgrade that is included in Base Plan Funding.
   - SPP transfers this lump sum payment to the Transmission Customer and the amount of revenue credits for which the Project Sponsor is eligible is reduced.
   - SPP bills appropriate T~~t~~ransmission C~~c~~ustomers for rates associated with new PTP service
   - Transmission Owner receives revenues from SPP for lump-sum payment.
   - The Project Sponsor continues to make monthly payments for the PTP rate ~~net of the~~ absent revenue credits from the impact of the new DNR on the Directly Assigned Network Upgrade.
3) If the initial term of the transmission service contract is not yet completed, the TC continues to take transmission service, and the dollar flows are the same as above without any revenue credits being received from the Transmission Customer's own impact on the Directly Assigned Network Upgrade.

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III. Alternative Resolutions for Unresolved Issues Related to Attachment Z

A. Project Sponsors – Not ~~Tak~~Requesting Transmission Service With the Directly Assigned Network Upgrade.

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1. Proposals for evaluation of speculative or competing alternative transmission upgrade projects.

a. The SPP should have a process separate from the aggregate study process that provides estimates of transmission upgrade costs for speculative or competing alternative transmission upgrade projects where it is understood that these estimates do not include any cost sharing possible from the aggregate study process. SPP could hire an outside consultant to perform these studies, and transmission customers requesting these studies be performed would pay the consultant fee. However, the results could be misleading. If three alternatives are studied and one is selected on a stand alone basis, there is no

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assurance that this is the best choice on an aggregate basis. This separate procedure could only serve as a screening procedure. It still might reduce the number of speculative requests.

b. Any alternatives?

~~1.~~2.Proposals for allowing Project Sponsors to benefit from the Aggregate Study process.

a. Allow Project Sponsors to submit upgrades to which they are already fully committed (Why would you want to study something that you are already fully committed to?) into the aggregate study process at any time prior to the in service date of the upgrade. Any transmission service request granted that requires the Project Sponsor's upgrade to be in place would share in the cost of the upgrade.

b. Any alternatives?

~~2.Proposals for evaluation of speculative or competing alternative transmission upgrade projects.~~

~~a.The SPP should have a process separate from the aggregate study process that provides estimates of transmission upgrade costs for speculative or competing alternative transmission upgrade projects where it is understood that these estimates do not include any cost sharing possible from the aggregate study process.~~ (Customers can't commit as long as the numbers keep changing.)

~~b.Any alternatives?~~

3. Proposals for cutting down on the time required to finish the Aggregate Study Process.

a. Only allow a fixed number of iterations (probably 6 – 120 days) by ~~mak~~requiring anyone signing up for the last iteration to pre-commit to the project. This would require SPP providing information on worst case scenarios to those included in the second to last iteration prior to their making a commitment to participate in the last iteration.

b. Any alternatives

~~4.~~For purposes of determining the cost of a Directly Assigned Network Upgrade that is assigned to a subsequent request for transmission service, should accumulated deprecation be subtracted from the original cost? ~~Along with a standard payment of revenue requirements over the asset life, should SPP also have a standard lump sum payment option, or should this be left as a contractual arrangement between the Project Sponsor and the Transmission Owner?~~

4. YES

~~**Gene Anderson write up insert here.**~~ Straight-line depreciation should be used in the calculation of accumulated depreciation and subtracted from the original cost of the Directly Assigned Network Resource. The reason for doing so is because the request for a new or changed DR may occur several years after the date at which the Directly Assigned Network Upgrade is made, and there needs to be some mechanism to account for the age of the facilities in order that subsequent users are not overcharged for their use of older facilities. Straight-line

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depreciation is the most straight-forward method, and does not front load depreciation costs as would be the case for depreciation associated with levelized fixed charge rates.

No. While straight line depreciation maybe the most straight-forward method, it may not be consistent with the TO's determination of its fixed charge rate. Any depreciation method used must be consistent with the method used to determine the payments being made by the Assignee.

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NO – Mike Wiese write up here

~~However, depending on how narrowly a lump-sum standard payment option is defined, there may be no objection to its inclusion. What follows are some thoughts about various things that need not be included in a lump-sum standard payment option.~~

- ~~If by a standard lump-sum payment option is meant a determination of such terms as how many payments and when the payments are due, this should be left as a contractual arrangement between the parties. It would appear that having a single payment due at the time the project is in service would be the default standard, but variations could occur that involve interest payments. SPP should not be in the business of setting interest rates.~~
- ~~If a standard lump-sum payment option is meant to address issues such as interest on funds used during construction, such issues would be addressed in the standard payment of revenue requirements over the asset life.~~

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5. Should Project Sponsors that did not request transmission service at the time of their request for the Directly Assigned Network Upgrade receive revenue credits from subsequent transmission service only if that transmission service is granted in the same direction of the original congestion that the Directly Assigned Network Upgrade was intended to relieve?

YES

a. To go with both directions raises questions that are difficult to answer. First, recall that for Project Sponsors the denominator for the percent of MW impact used to calculate revenue credits is the incremental capacity provided by the Directly Assigned Network Upgrade. Allowing revenue credits in both directions raised the question of whether or not the denominator in this calculation should be the sum of the incremental "physical" capacities in both directions, or should there be a different calculation made for each direction? Second, counterflow creates additional capacity in the ~~opposite~~opposite direction. Thus, relief of congestion in a specific direction not only creates additional "physical" capacity in the opposite direction, but also when greater flows now occur over the flowgate in the direction of what was ~~previously~~previously congested, what should now be counted as the additional capacity created by the upgrade in the opposite direction? Third, if you go to giving revenue credits in both directions, should you consider giving counterflow (transmission customers taking subsequent transmission service in a direction opposite to transmission service taken by other transmission customers) revenue credits?

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b. If it is clear that the upgrade was meant to relieve congestion in a specific direction, then it is simpler to use that direction in the calculation of MW impact. For transmission upgrades where SPP has prepared an economic analysis, the direction for the congestion relief that is generating the benefits will be delineated as a part of the study, and Project Sponsors should be limited to revenue credits in that same direction. It is possible, that at various times, the congestion is relieved in different directions. In these instances, Project Sponsors would be

required to specify the direction in which they would want to receive revenue credits. If there are multiple Project Sponsors for a given upgrade, then the choices of direction need not be the same for each Project Sponsor. In the instance where SPP has not prepared an economic analysis (likely to be fairly small, low cost upgrades), Project -Sponsors would be asked to specify the direction over which they would want to receive revenue credits.

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NO

The pivotal question should be could the service be sold with out the upgrade. If it could then no credits are due. If it couldn't credits should be paid.

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a. Project sponsors should be treated as if they are transmission owners in ~~mechant~~merchant transmission projects who earn from any use of the new facilities in which they have made an investment. Since transmission owners obtain revenues from transmission service taken in either direction, Project Sponsors should also receive revenue credits from transmission service taken in either direction. This also raises the question as to whether Project Sponsors should be allowed to become Transmission Owners.

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b. Project sponsors without a related transmission service request may want to build a particular transmission element where involving increasing both export and import capability. For example, suppose a load serving entity (LSE) has its own local generation, but is connected to the transmission system by a single radial line. The LSE desires a second redundant line to interconnect to the transmission system – but this serves dual purposes. Not only does it give the LSE another import path, it also gives the LSE another export path. The LSE does not explicitly request import or export capacity, rather it pays for the second radial line, completing a loop. In this case, the goal of the LSE is to install the facility, not specifically to obtain transfer capability in one direction or another. The resultant loop may provide transfer capacity in both directions. The LSE should benefit whatever direction the new loop element allows transfer capability. Additional examples could be a project that has a specific transmission element that is funded by several participants, none with transmission service requests, and each participant may have its own reason for participation. One may want transfer capability in one direction, another in an opposite direction and a third, perhaps, wants the transmission element to idle must run generation. Regardless of the motivation for the specific element none of the project sponsors are specifying transfer capability in any direction, nor are they buying transmission service in either direction, they are merely willing to build the new transmission element for various perceived benefits.

~~5.~~6. Should eligibility to receive revenue credits be for a fixed period (and if so, how many years), or should eligibility to receive revenue credits be for the service life of the asset?

a. Fixed Period – 30 Years

The definition of "service life" in the draft Attachment Z2 reads as follows: "The time between the date electric plant is includible in electric plant in service, or electric plant leased to others, and the date of its retirement." This definition adopts an accounting life concept, in contrast with other types of service life such as the actual physical life, an engineering projection of physical life, and the tax life used for accelerated depreciation. Whereas accounting life and tax life both play major roles in determining standard revenue requirements, the physical life determines the period over which the facility is available to create revenue credits.

One advantage of using the accounting service life of a project to determine the maximum crediting period is that it gives the appearance of matching the potential credits with the period of time over which the transmission owner receives a return on the facility that is funded by the project sponsor or transmission customer. However, these time periods may not match in any event since the amortization period for revenue requirements purposes can be shorter than the accounting service life. In addition, there are other issues related to the service life that must be resolved if it is to be used as the basis for defining the period in which credits are applied.

Most upgrade projects are likely to include equipment assigned to multiple FERC accounts, with each account having a different service life, a different net salvage value, and a different depreciation rate. In such cases, a determination has to be made as to which equipment component's service life is used to determine the crediting period, and no single value may be accurate for the upgrade project in aggregate.

The service life used for accounting purposes can vary among companies, among regulatory jurisdictions, and among rate case orders. Should the crediting period vary depending on the transmission owner that constructs the project? Should the crediting period change if a rate order modifies the service life and the accompanying depreciation rate?

Both physical life and accounting life can be shortened by natural events, accidents, and technical obsolescence. Presumably, the crediting period must be shortened if a facility is retired early. In addition, the physical life sometimes can be extended by maintenance activity, capital additions, or both. These factors potentially create more uncertainty regarding the determination of service life.

As mentioned above, a possible alternative to utilizing service life as the maximum crediting period is to use a standard limit such as 30 years for all requested upgrades. A standard time limit would resolve some of the above questions associated with service life and would be simpler to administer. In addition, a standard crediting period may result in greater equity as a consistent time limit is applied to all upgrade projects, all transmission owners, and all customers or project sponsors.

b. Service Life

Service life should be used for the period over which a project sponsor, whether taking transmission service or not, can receive revenue credits for the reasons below.

1. The project sponsor should receive revenue credits for all additional transmission service that could not be provided with out the upgrade; therefore as long as the project is in service the project sponsor should be eligible to receive revenue credits.

2. The excess that the project sponsor will pay over and above the base rates will be based upon the revenue requirements of the upgrade which will represent a composite (dollar weighted) service life for the upgrade.

3. Transmission owners do not use the same depreciation rates and choosing a standard term for revenue credits would be inconsistent with how the excess which is eligible for revenue credits is initially determined.

~~4.~~ If an upgrade is removed from service earlier than originally anticipated that upgrade is no longer available to provide revenue credits whether service life or some other term is chosen.

B. Subsequent Transmission Use of Directly Assigned Network Upgrades in the Form of Requests for New of Changed Designated Resources.

~~1.~~In Attachment J, if a DNR request results in the load-serving entities reserve margin ~~to~~ exceeding the 125% limit in the first few years after the resource comes on line, how should the customer be directly assigned any of the costs associated with upgrades required by the request ~~pay the charges for any upgrades during those years but then be eligible for Base Plan Funding at the time the load-serving entity's reserve margin falls below 125%~~?

~~YES~~

The purpose of the 125% reserve margin limit on DRs is as an upper bound to prevent gaming with respect to an individual load-serving entity from in essence reserving significantly more transmission than is needed to serve its load.

ALTERNATIVES:

a. The MW level by which the DR exceeds the 125% level as a percent of the DR request is used to directly assign the costs of any upgrades in excess of the safe harbor limit for the amount of the request which less than 125%. This is what is currently done. (Isn't this the way this is being done?)

b. The transmission customer is initially assigned the percent of costs by which the DR request exceeds the 125% reserve margin (see a. above). If the actual reserve margin falls below the 125% level after an initial period where that limit was exceeded, then the payments for the upgrades that were directly assigned to the transmission customer should ~~now~~ then be Base Plan Funded through the cost allocation mechanism. Moreover, once the reserve levels fall below the 125% level, the issue of reserving significantly more transmission than is needed to serve load goes away.

c. Any other alternatives?

~~NO is there an alternative?~~

C. Subsequent Transmission Use of Directly Assigned Network Upgrades by New Network Load.

1. Would it make sense to ~~simply~~ include revenue credits from ~~Base Plan funded~~ future reliability projects (those included at a later date in the SPP transmission plan) that would otherwise be needed "but for" the construction and availability of the Directly Assigned Network Upgrades?

YES, this is a case where the "but for" condition makes sense, at least to the extent that this can be done in the SPP planning process.

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a. One way to do this is to exclude all Directly Assigned Network Upgrades from the SPP base case to identify criteria violations and needed upgrades.
b. Then answer the question: which of the needed upgrades are displaced by existing Directly Assigned Network Upgrades.

NO. ~~– is there an alternative?~~ making the "but for" calculations in the SPP planning process could require extensive additional modeling. RTWG should obtain SPP input before going forward with the types of calculations that could be required for including revenue requirements for older projects.

D. Subsequent Transmission Use of Directly Assigned Network Upgrades by New ~~Point-To-Point~~PTP Transmission Service Other Than New or Changed Designated Resource.

1. Should the applicable PTP rate include "higher of" pricing via applicable cost from Directly Assigned Network Upgrades?

YES

a. Comparability to PTP service that includes a new or changed DR - Should be the same as for a request for DR through a request for long-term PTP service that impacts a Directly Assigned Network Upgrade, and both should include an assigned portion of the costs in the calculation of the "higher of" price.
b. A request for long-term PTP service may (and is likely to) require additional upgrades. If the Directly Assigned Network Upgrades are excluded from the "higher of" calculations, then a proper allocation of revenue credits to Project Sponsors will not result.

NO

a. Discourages sales of PTP service and will result in lower revenues.
b. Could potentially result in gaming by customers taking short-term rather than long-term PTP service.

E. ~~Revenue Credit Streams Versus Lump Sum Credits~~ ~~– this was left in the white paper in case there is not agreement on what was included in the previous section on this subject as a recommendation.~~

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APPENDIX A
EXAMPLES OF CALCULATION OF MW IMPACT FROM NEW TRANSMISSION REQUESTS

Assumptions common to all examples:

1. Directly Assigned Network Upgrade increased the capacity of the existing flowgate by 500 MW in the A to B direction.
2. New transmission service request from Customer B has a 50 MW impact on the same flowgate and in the same A to B direction.
3. The original cost of the Directly Assigned Network Upgrade was $16,000,000.
4. The Directly Assigned Network Upgrade has been in service for 10 Years with a depreciation life of 40 years.

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Calculation common to all examples: The net plant value of the Directly Assigned Network Upgrade:

Original Cost – Accumulated Depreciation

$16,000,000 – (10/40)*($16,000,000) =

$16,000,000 - $4,000,000 = **$12,000,000**

Example A: MW Impact as a percent of Incremental MW Capacity

Additional Assumption: The project sponsor that requested the Directly Assigned Network Upgrade did so without requesting any transmission service..

1. Percent of MW capacity from the new transmission service:

   50 MW % 500 MW = 10%

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2. Cost of Directly Assigned Network Upgrade allocated to Customer B:

   $12,000,000 * 10% = **$1,200,000**

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Example B: MW Impact as a percent of Incremental Transmission Service

Additional Assumption: The customer that requested the Directly Assigned Network Upgrade (Customer A) did so through a request for transmission service, and that transmission service uses 100 MWs of the 500 MWs of increased capacity on the flowgate

1. Percent of incremental transmission service taken on the Directly Assigned Network Upgrade by Customer B:

   50 MW % (100 MW + 50 MW) =

   50 MW % 150 MW = 33.3%

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2. Cost of Directly Assigned Network Upgrade allocated to Customer B:

   $12,000,000 * 33.3% = **$4,000,000**

Example C: MW Impact from adding subsequent new transmission service

Additional Assumption: In example B, assume that after the first new customer (Customer B) was granted transmission service, a second new customer (Customer C) is granted new transmission service with a 25 MW impact on the Directly Assigned Network Upgrade in the same direction, A to B.

1. Percent of incremental transmission service taken on the Directly Assigned Network Upgrade by Customer C.

   25 MW % (100 MW + 50 MW + 25 MW) =

   25 MW % 175 MW = 14.3 %

2. Cost of Directly Assigned Network Upgrade allocated to Customer C:

   $12,000,000 * 14.3 % = **$1,714,286**

Example D: MW Impact from adding multiple new transmission service

Additional Assumption: In example B, assume that at the same time both transmission customers request transmission service – Customer B for 50 MW and Customer C for 25 MW.

1. Percent of incremental transmission service taken on the Directly Assigned Network Upgrade by the new customers:

   Customer B: 50 MW % 175 MW = 28.6%

   Customer C: 25 MW % 175 MW = 14.3%

2. Cost of Directly Assigned Network Upgrade allocated to new transmission service customer:

   Customer B: $12,000,000 * 28.6% = **$3,428,571**

   Customer C: $12,000,000 * 14.3% = **$1,714,286**

Example E: Compare Examples B combined with C to Example D

Notice that Customer B is paying less in example D than he would be paying in example B, simply because of the sequencing of the service request. To correct this problem, Customer B along with Customer A should be eligible for revenue credits from Customer C. Thus in example C, the distribution of revenue credits from Customer C between Customers A and B is:

1. Percent allocation of revenue credits between Customers A and B:

   Customer A: 100 MW % 150 MW = 66.7%

   Customer B: 50 MW % 150 MW = 33.3%

2. Allocation of Revenue Credits from Customer C to Customers A and B:

   Customer A: $1,714,286 * 66.7% = $1,141,857

   Customer B: $1,714,286 * 33.3% = $571,429

Notice that with this revenue credit from Customer C, Customer B is now paying in net the same amount as shown in Example D; i.e.,

$4,000,000 (to Customer A) - $571,429 (from Customer C) = **$3,428,571**

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APPENDIX B
EXAMPLES OF DOLLAR FLOWS FOR VARIOUS APPLICATIONS OF HIGHER OF PRICING FOR PTP SERVICE ASSOCIATED WITH A DESIGNATED RESOURCE

Example 1: Basic Calculations

- The Attachment J assignment of costs to the new transmission customer from the Directly Assigned Network Upgrade costs exceeds the safe-harbor provision of $180,000/MW.
- The excess over the safe-harbor limit are directly assigned to the new transmission customer.

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Example 1: Basic Parameters Assumed		
Upgrade Original Cost	$65,000,000	Gross Plant
Depreciation Life	30	Years
Accum. Depreciation	$6,500,000	after 3 years
Cost Included	$58,500,000	Net Plant
PTP Reservation	100	MW
Trans Serv Term	5	Years
PTP Service Charge	$1,200,000	Assumed $1/kW/Month
% Distriburtion Factor	20%	Impact on Upgrade

Attachment Z Calculation		
Cost Included	$58,500,000	Net Plant
Initial TC MW Impact	40	Assumed
New TC MW Impact	20	(%DF)*(MW Resrv)
Total MW Impact	60	Sum
% New TC	33%	(New TC MW) / (Total MW)
New TC $	**$19,500,000**	(New TC %) * (Cost Included)

Attachment J Calculations		
Cost / MW	$195,000	(New TC %) / (MW Resrv)
Safe Harbor Limit	$18,000,000	(180,000/Mw) * (MW Resrv)
Eligible for BPF	**$18,000,000**	Min (New TC $, Safe Harbor)
Direct Assign	**$1,500,000**	(New TC$) - (Eligible for BPF)

Example 1: Dollar Flows

SPP Revenue Sources

- BPF upgrade costs are collected through zonal rates per the cost allocation in Attachment J.
- The revenue requirements associated with these directly assigned costs to the new transmission customer are less than the PTP rate, resulting in the new transmission customer paying only the PTP rate.

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BPF Rate Calculations		
Eligible for BPF	$18,000,000	(180,000/Mw) * (MW Resrv)
Annual Revenues BPF	**$3,060,000**	17% Fixed Charge times BPF Costs

"Higher of" Rate Calculations		
Direct Assign	$1,500,000	(New TC$) - (Eligible for BPF)
Fixed Charge %	32%	Calc for 5 yr. Trans Serv Resrv
Annual Cost	$480,000	per year
PTP Service Charge	$1,200,000	per year
Customer Pays Higher of	**$1,200,000**	Max (Annual Cost, PTP Serv Chrg)

SPP Revenue Payments

- The original transmission customer receives all the revenues from the BPF.
- The revenues collected from the PTP rate are split between the original transmission customer (to cover the costs directly assigned to the new transmission customer) and the other transmission owners (TOs) per the standard SPP revenue distribution formula.

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Dollar Flows

Payments to SPP	$4,260,000	
FROM		
New TC	$1,200,000	PTP Rate
BPF	$3,060,000	Rolled into Zonal Rates
Payments by SPP	$4,260,000	
TO		
Initial TC	$3,540,000	
	$3,060,000	From BPF Rates
	$480,000	Direct Assigned to new TC
Other TOs	$720,000	From PTP Rate - New TC

Example 3: Basic Calculations

- The Attachment J assignment of costs to the new transmission customer from the Directly Assigned Network Upgrade costs are less than the safe-harbor provision of $180,000/MW.
- There are no directly assigned costs to the new transmission customer.

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Example 3: Basic Parameters Assumed		
Upgrade Original Cost	$10,000,000	Gross Plant
Depreciation Life	30	Years
Accum. Depreciation	$1,000,000	after 3 years
Cost Included	$9,000,000	Net Plant
PTP Reservation	100	MW
Trans Serv Term	5	Years
PTP Service Charge	$1,200,000	Assumed $1/kW/Month
% Distriburtion Factor	20%	Impact on Upgrade

Attachment Z Calculation		
Cost Included	$9,000,000	Net Plant
Initial TC MW Impact	40	Assumed
New TC MW Impact	20	(%DF)*(MW Resrv)
Total MW	60	Sum
% New TC	33%	(New TC MW) / (Total MW)
New TC $	$3,000,000	(New TC %) * (Cost Included)

Attachment J Calculations		
Cost / MW	$30,000	(New TC %) / (MW Resrv)
Safe Harbor Limit	$18,000,000	(180,000/Mw) * (MW Resrv)
Eligible for BPF	**$3,000,000**	Min (New TC $, Safe Harbor)
Direct Assign	**$0**	(New TC$) - (Eligible for BPF)

Example 3: Dollar Flows

SPP Revenue Sources

- BPF upgrade costs are collected through zonal rates per the cost allocation in Attachment J.
- With no directly assigned costs to the new transmission customer, that customer only pays the PTP rate.

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BPF Rate Calculations			
Eligible for BPF	$3,000,000		(180,000/Mw) * (MW Resrv)
Annual Revenues BPF	**$510,000**	17%	Fixed Charge times BPF Costs

"Higher of" Rate Calculations		
Direct Assign	$0	(New TC$) - (Eligible for BPF)
Fixed Charge %	32%	Calc for 5 yr. Trans Serv Resrv
Annual Cost	$0	per year
PTP Service Charge	$1,200,000	per year
"Higher of" Charge	**$1,200,000**	Max (Annual Cost, PTP Serv Chrg)

SPP Revenue Payments

- The original transmission customer receives all the revenues from the BPF.
- The revenues collected from the PTP rate all go to other transmission owners (TOs) as the original transmission customer is fully compensated for the costs assigned out through Attachment J.

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Dollar Flows

Payments to SPP	$1,710,000	
FROM		
New TC	$1,200,000	PTP Rate
BPF	$510,000	Rolled into Zonal Rates
Payments by SPP	$1,710,000	
TO		
Initial TC	$510,000	
	$510,000	From BPF Rates
	$0	Direct Assigned to new TC
Other TOs	$1,200,000	From PTP Rate - New TC

Example 2: Basic Calculations

- The Attachment J assignment of costs to the new transmission customer from the Directly Assigned Network Upgrade costs exceeds the safe-harbor provision of $180,000/MW.
- The excess over the safe-harbor limit are directly assigned to the new transmission customer.

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Example 2: Basic Parameters Assumed		
Upgrade Original Cost	$100,000,000	Gross Plant
Depreciation Life	30	Years
Accum. Depreciation	$10,000,000	after 3 years
Cost Included	$90,000,000	Net Plant
PTP Reservation	100	MW
Trans Serv Term	5	Years
PTP Service Charge	$1,200,000	Assumed $1/kW/Month
% Distriburtion Factor	20%	Impact on Upgrade

Attachment Z Calculation		
Cost Included	$90,000,000	Net Plant
Initial TC MW Impact	40	Assumed
New TC MW Impact	20	(%DF)*(MW Resrv)
Total MW	60	Sum
% New TC	33%	(New TC MW) / (Total MW)
New TC $	$30,000,000	(New TC %) * (Cost Included)

Attachment J Calculations		
Cost / MW	$300,000	(New TC %) / (MW Resrv)
Safe Harbor Limit	$18,000,000	(180,000/Mw) * (MW Resrv)
Eligible for BPF	**$18,000,000**	Min (New TC $, Safe Harbor)
Direct Assign	**$12,000,000**	(New TC$) - (Eligible for BPF)

Example 2: Dollar Flows

SPP Revenue Sources

- BPF upgrade costs are collected through zonal rates per the cost allocation in Attachment J.
- The revenue requirements associated with these directly assigned costs to the new transmission customer are greater than the PTP rate, resulting in the new transmission customer paying more than the PTP rate.

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BPF Rate Calculations			
Eligible for BPF	$18,000,000		(180,000/Mw) * (MW Resrv)
Annual Revenues BPF	**$3,060,000**	17%	Fixed Charge times BPF Costs

"Higher of" Rate Calculations		
Direct Assign	$12,000,000	(New TC$) - (Eligible for BPF)
Fixed Charge %	32%	Calc for 5 yr. Trans Serv Resrv
Annual Cost	$3,840,000	per year
PTP Service Charge	$1,200,000	per year
Customer Pays Higher of	**$3,840,000**	Max (Annual Cost, PTP Serv Chrg)

SPP Revenue Payments

- The original transmission customer receives all the revenues from the BPF.
- The revenues collected from the PTP rate all go to the original transmission customer to cover the costs directly assigned to the new transmission customer. Other transmission owners (TOs) receive no revenues from the new transmission customer.

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Dollar Flows		
Payments to SPP	$6,900,000	
FROM		
New TC	$3,840,000	PTP Rate
BPF	$3,060,000	Rolled into Zonal Rates
Payments by SPP	$6,900,000	
TO		
Initial TC	$6,900,000	
	$3,060,000	From BPF Rates
	$3,840,000	Direct Assigned to new TC
Other TOs	$0	From PTP Rate - New TC