Carolinas Transmission Planning Collaborative

CTPC TRANSMISSION COST ALLOCATION SUMMARY

I. SUMMARY OF TRANSMISSION COST ALLOCATION FOR LOCAL CTPC PROJECTS

Transmission cost allocation typically is governed by the OATT of each Transmission Provider. The CTPC Participants have developed cost allocation methodologies that apply in special circumstances that are defined in Section 7 of Attachment N-1 of Duke Energy Carolinas, LLC's (DEC) and Duke Energy Progress, LLC's (DEP) Joint Open Access Transmission Tariff (Joint OATT). This document provides further implementation details and descriptions of those methodologies. If there is a conflict between this document and the Joint OATT, the Joint OATT controls.

The CTPC Participants have developed an "avoided cost" cost allocation methodology that applies to Joint Local Reliability Projects where there is a demonstration that a local transmission solution and local approach to cost allocation results in cost savings. Such "Joint Local Regional Reliability Projects" are projects that are proposed in lieu of "Reliability Projects," which are projects required to preserve system reliability. The CTPC Participants also have developed a "requestor pays" cost allocation methodology that applies to "Joint Local Economic Projects" which improve economic power transfers between control areas. These two cost allocation methodologies apply to projects that are within the scope of the planning performed by the CTPC, which focuses on the bulk transmission system (i.e., 230 kV and above facilities and lower-voltage facilities that substantively affect the transmission planning process).

Please note that for purposes of the following cost allocation discussion, all monetary amounts are net present value (NPV) amounts, unless otherwise noted.

II. OATT COST ALLOCATION FOR RELIABILITY PROJECTS

A transmission system is a complex system where each Transmission Provider's system reliability is also dependent upon its neighboring transmission systems. In recognition of this interdependence, reliability issues affecting one transmission system may require transmission upgrades on an adjacent transmission system. In addition, the reliability needs of a transmission system will change over time as a result of network and native load growth, the addition of new generation resources, the retirement of generation, and the provision of additional long-term firm point-to-point transmission service. FERC's OATT and NERC requirements

mandate that Transmission Providers, such as DEC and DEP must construct the facilities necessary to maintain reliable service in light of these needs. Any such facilities that are integrated network transmission facilities are denominated "Reliability Projects" herein.

III. "AVOIDED COST" COST ALLOCATION METHODOLOGY FOR RELIABILITY PROJECTS THAT QUALIFY AS "JOINT LOCAL RELIABILITY PROJECTS"

A. Identification of Joint Local Reliability Projects Subject to Avoided-Cost Allocation

While individual Reliability Projects may arguably (and alternately) benefit customers on a neighboring system or may benefit some customers on one system more than others on the same system, the CTPC believes that Reliability Projects generally benefit all customers within the relevant service territory of the Transmission Provider and that therefore the costs should be allocated in accordance with the "or" pricing policy currently included in the Commission's *pro forma* OATT. The CTPC, however, recognizes an exception to the general rule that the costs of projects needed for reliability should be allocated to a particular Transmission Provider's customers. Specifically, Joint Local Reliability Projects, which can be identified through the CTPC's local planning process, should have their costs allocated on an avoided-cost basis.

The CTPC Planning Process results in a set of projects that satisfy the reliability criteria of the Transmission Providers who are a party to the CTPC agreement (i.e., Reliability Projects). Through this process, a project may be identified that meets a reliability need in a more cost-effective manner than if each Transmission Provider were only considering projects on its system to meet its reliability criteria. For purposes of eligibility, a Joint Local Reliability Project can be defined as any reliability project that requires an upgrade to a Transmission Provider's system that would not have otherwise been made at that time based upon the reliability needs of the Transmission Provider. For example, assume that there is a reliability issue on the system of DEC, and this issue can be addressed by: Option 1 - a project that consists of upgrades solely on the system of DEC; Option 2 - a project that consists of upgrades solely on the system of DEP; or Option 3 - a project that encompasses upgrades on both the DEC and DEP systems. Options (2) and
(3) would qualify as Joint Local Reliability Projects, if they are lower cost than Option (1). In both cases, there is an upgrade that is not needed to maintain reliability on the transmission system of at least one of the Transmission Provider's whose system is being upgraded. In addition, if accelerating a Reliability Project on the DEP system results in the elimination of an upgrade on the DEC system, the cost of the acceleration will be designated a Joint Local Reliability Project. A Joint Local Reliability Project must have a cost of at least $1 million to be subject to the cost allocation proposal described below. The costs

of a Joint Local Reliability Project with a cost of less than $1 million would be borne by each Transmission Provider based on the costs incurred on its system.

B. Avoided Cost Methodology

As noted, unless a Joint Local Reliability Project is determined by the CTPC to be the most cost-effective solution to a reliability need, it will not be selected to be included in the Plan of the CTPC. But, if a Joint Local Reliability Project is included, it will have its costs allocated based on an avoided cost approach, whereby each Transmission Provider looks at the next-best approach to maintaining reliable service and shares the savings on a pro-rata basis. These cost responsibility determinations will then be reflected in transmission rates. Each Transmission Provider will be reimbursed for its investment for the Joint Local Reliability Project based on a transmission levelized fixed charge rate filed with FERC. Where practical, Joint Local Reliability Projects may be grouped to net out allocations across Transmission Provider borders.

C. Example 1: A Joint Local Reliability Project on system of one Transmission Provider solves reliability issue on system of other Transmission Provider.

(1) Transmission Provider	(2) Cost to Meet Reliability Needs on a Stand Alone Basis (MM)	(3) Cost of Joint Local Reliability Project (MM)	(4) Avoided Transmission Project Cost (MM)	(5) Costs to Meet Reliability Needs on a Joint Local Basis (MM) (2) + (3) - (4) = (5)
DEC	$500	0	$50	$450
DEP	$400	$30	0	$430
Total	**$900**	**$30**	**$50**	**$880**

In this example, DEC needs to spend $500 million to meet all of its Reliability Project needs, assuming it does not have the option of meeting its reliability need with a project on system of DEP. The $500 million includes $50 million for a Reliability Project on its system. But, by

DEP spending $30 million on a Joint Local Reliability Project, DEC could avoid building that $50 million project. DEP needs to spend $400 million for Reliability Projects on its system to meet its needs. DEP also will spend an additional $30 million on its system to meet the DEC reliability need.

The avoided cost methodology for allocating cost responsibility would apply as follows:

(DEC's Avoided Cost/Total Avoided Cost) * cost of Joint Local Reliability Project

($50 million/$50 million) * $30 million = $30 million

(DEP Avoided Cost/Total Avoided Cost) * cost of Joint Local Reliability Project

($0 million/$50 million) * $30 million = $0

In sum, from a cost incurrence perspective, DEC spends $450 million and DEP spends $430 million. But, from a cost responsibility perspective DEC is allocated $30 million of DEP' costs.

D. Example 2: A Joint Local Reliability Project on system of two Transmission Providers solves reliability issue on system of one Transmission Provider.

(1) Transmission Provider	(2) Cost to Meet Reliability Needs on a Stand Alone Basis (MM)	(3) Cost of Joint Local Reliability Project (MM)	(4) Avoided Transmission Project Cost (MM)	(5) Costs to Meet Reliability Needs on a Joint Local Basis (MM) (2) + (3) - (4) = (5)
DEC	$500	$20	$50	$470
DEP	$400	$10	0	$410
Total	**$900**	**$30**	**$50**	**$880**

In this example, DEC needs to spend $500 million to meet all of its Reliability Project needs, assuming it does not have the option of meeting its reliability need with a project on system of DEP. The $500 million

includes $50 million for a Reliability Project on its system. But, by DEP spending $10 million on a Joint Local Reliability Project and DEC spending $20 million on the same project, DEC could avoid building that $50 million project. DEP needs to spend $400 million for Reliability Projects on its system to meet its needs. DEP also will spend an additional $10 million on its system to meet the DEC reliability need.

The avoided cost methodology for allocating cost responsibility would apply as follows:

(DEC's Avoided Cost/Total Avoided Cost) * cost of Joint Local Reliability Project

($50 million/$50 million) * $30 million = $30 million

(DEP Avoided Cost/Total Avoided Cost) * cost of Joint Local Reliability Project

($0 million/$50 million) * $30 million = $0

In sum, from a cost incurrence perspective, DEC spends $470 million and DEP spends $410 million. But, from a cost responsibility perspective DEC is allocated $10 million of DEP' costs.

E. Example 3: A Joint Local Reliability Project on system of two Transmission Providers solves reliability issues on systems of both Transmission Providers.

(1) Transmission Provider	(2) Cost to Meet Reliability Needs on a Stand Alone Basis (MM)	(3) Cost of Joint Local Reliability Project (MM)	(4) Avoided Transmission Project Cost (MM)	(5) Costs to Meet Reliability Needs on a Joint Local Basis (MM) (2) + (3) - (4) = (5)
DEC	$500	$20	$50	$470
DEP	$400	$10	$5	$405
Total	**$900**	**$30**	**$55**	**$875**

In this example, DEC needs to spend $500 million to meet all of its Reliability Project needs, assuming it does not have the option of meeting its reliability need with a project on system of DEP. The $500 million includes $50 million for a Reliability Project on its system. But, by DEP spending $10 million on a Joint Local Reliability Project and DEC spending $20 million on the same project, DEC could avoid building that $50 million project. DEP needs to spend $400 million for Reliability Projects on its system to meet its needs. But, as a result of the same Joint Local Reliability Project, DEP can avoid spending $5 million to meet its own reliability needs.

The avoided cost methodology for allocating cost responsibility would apply as follows:

(DEC's Avoided Cost/Total Avoided Cost) * cost of Joint Local Reliability Project

($50 million/$55 million) * $30 million = $27.3 million

(DEP Avoided Cost/Total Avoided Cost) * cost of Joint Local Reliability Project

($5 million/$55 million) * $30 million = $2.7 million

In sum, from a cost incurrence perspective, DEC spends $470 million and DEP spends $405 million. But, from a cost responsibility perspective DEC is allocated $7.3 million of DEP' costs.

F. Example 4: Accelerating a Reliability Project on one Transmission Providers' system solves reliability issues on another Transmission Providers' system.

(1) Transmission Provider	(2) Cost to Meet Reliability Needs on a Stand Alone Basis (MM)	(3) Cost of Joint Local Reliability Project (MM) (Cost of Acceleration)	(4) Avoided Transmission Project Cost (MM)	(5) Costs to Meet Reliability Needs on a Joint Local Basis (MM) (2) + (3) - (4) = (5)
DEC	$500	$20	$0	$520
DEP	$400	$0	$50	$350
Total	**$900**	**$20**	**$50**	**$870**

In this example, DEC needs to spend $500 million to meet all of its Reliability Project needs. The $500 million includes $120 million for a Reliability Project on its system. DEP needs to spend $400 million to meet all of its Reliability Project needs, including $50 million for a Reliability Project on its system. However, if DEC accelerates the $120 million project by 5 years, DEP could avoid building its $50 million project. The cost of accelerating the Reliability Project by 5 years is a lower cost solution and thus is designated as a Joint Local Reliability Project. The cost of the Joint Local Reliability Project is the cost of the 5- year acceleration of the $120 million Reliability Project, or $20 million, which is calculated by subtracting the NPV of completing the project in 5 years from the NPV of completing the project in 10 years.

The avoided cost methodology for allocating cost responsibility would apply as follows:

(DEC's Avoided Cost/Total Avoided Cost) * cost of Joint Local Reliability Project

($0 million/$50 million) * $20 million = $0

(DEP Avoided Cost/Total Avoided Cost) * cost of Joint Local Reliability Project

($50 million/$50 million) * $20 million = $20 million

In sum, from a cost incurrence perspective, DEC spends $520 million and DEP spends $350 million. But, from a cost responsibility perspective DEP is allocated $20 million of DEC's costs.

G. Joint Local Reliability Projects that Include Transmission Providers Outside the CTPC Footprint

If a Joint Local Reliability Project that is suitable for this alternate cost allocation approach involves a Transmission System(s) outside the CTPC, the costs should be fairly allocated among the affected Transmission Providers based on good-faith negotiation among the parties involved. It would be the intent of the CTPC Participants that the "avoided cost" approach outlined above be used as a starting point in the negotiations. The resulting transmission costs and the associated revenue requirements of each Transmission Provider will be recovered through their respective existing rate structures at the time. In the event that the affected Transmission Providers are unable to reach a negotiated solution then the CTPC would propose that the parties utilize the FERC's Dispute Resolution Service to settle any issues.

IV. "REQUESTOR PAYS" COST ALLOCATION METHODOLOGY FOR JOINT LOCAL ECONOMIC PROJECTS

A. Identification and Study of Joint Local Economic Projects

A Joint Local Economic Project is a project that permits energy to be transferred on a Point-to Point basis from an interface or a Point of Receipt on the DEC or DEP system to an interface or a Point of Delivery on the other company's system for a specified time period. Joint Local Economic Projects may be identified in the CTPC Transmission Advisory Group (TAG) process. The parameters of the project will also be identified through that process including the amount of megawatts that are being requested and the transmission customers who are requesting this project. The Joint Local Economic Project will be evaluated through the CTPC local planning process and cost estimates for the project will be developed.

B. "Requestor Pays" Cost Allocation Methodology for Joint Local Economic Projects

"Requestor Pays" is the approach to cost allocation under which the Transmission Customer(s) that are requesting the Joint Local Economic Project provides the up-front funding of any transmission construction that is required to ensure that the path is available for the relevant time period. These "requestor(s)" are the Transmission Customers that were allocated the MWs during this evaluation process. An example of this cost allocation is provided below in Section IV.D. Transmission Customers on the DEC and DEP systems would pay for firm PTP transmission service on each Transmission System along the Joint Local Economic Project path at the embedded cost rate.

The Transmission Customer would receive a levelized repayment of this initial funding amount from DEC and/or DEP in the form of monthly transmission credits over a maximum 20-year period. DEC and DEP will be permitted to work with the Transmission Customers to provide shorter or different crediting. As credits are paid, DEC and DEP could have the opportunity to include the

costs of upgrades that were needed for the Joint Local Economic Project in transmission rates, similar to the Generator Interconnection pricing/rate approach.

As part of the Joint Local Economic Project process, a network customer may ensure that power can be delivered from an interface on, or utilizing transmission capability created by, a Joint Local Economic Project to network load. Such network transmission service would not be subject to the requestor pays approach. This transmission cost allocation would be in accordance with OATT provisions for network service.

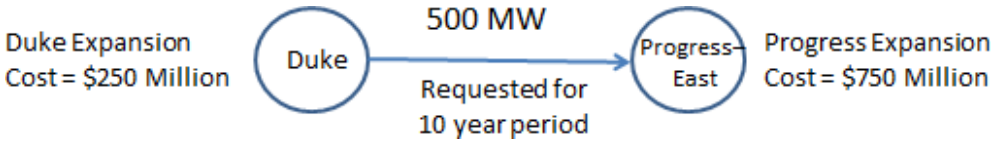
No additional compensation is provided to the requestors of the Joint Local Economic Project for any head-room or excess transmission capability that would be created on the DEC or DEP systems.

C. Adjustments to Costs to Reflect Impacts of Joint Local Economic Projects on Reliability Projects Included in Transmission Plans

The total project cost for the transmission expansion required due to a Joint Local Economic Project will be adjusted to provide compensation for the positive impacts that the Joint Local Economic Project would provide, given the existing Local Transmission Plan. Specifically, if the Joint Local Economic Project resulted in the delay of Reliability Projects, the net present value of this would be computed and subtracted from the net present value of the computed total project cost for the transmission expansion. For example, if the cost for the Joint Local Economic Project on the system of one Transmission Provider was computed to be $100 million, but this project would eliminate the need for a $25 million Reliability Project, then this positive impact would be subtracted from the total estimated cost of the Joint Local Economic Project and requestor(s) would be assessed a transmission expansion funding amount equivalent to $75 million NPV ($100 million - $25 million).

D. Example

"Within CTPC" – DEC to DEP-East – Increase interface by 500 MW



Assumptions:

- This Joint Local Economic Project will require projects that increase the DEC to DEP-East interface capability by 500 MW for 10 years.
    - Transmission Customer 1 subscribes to 200 MW.
    - Transmission Customer 2 subscribes to 300 MW.
- Total up-front funding requirement of $1 billion
    - DEC investment of $250 million
    - DEP investment of $750 million
- Transmission Customer allocations for this funding:
    - TC 1 pays up-front payment of $400 million with a payment of 25% of these funds ($100 million) going to DEC and 75% of these funds going to DEP ($300 million)
    - TC 2 pays up-front payment of $600 million with a payment of 25% of these funds ($150 million) going to DEC and 75% of these funds going to DEP ($450 million)