SPP Southwest Power Pool

CAWG MEETING
September 27, 2005
Hyatt Regency DFW
Dallas, TX
1:30 – 5:30 pm

AGENDA

1.	Meeting Begins	1:30 p.m.
2.	Presentation on Kansas Electric Transmission Authority Presentation by Larry Holloway	1:30 – 2:30
3.	Update on Large Generator Interconnection Task Force recommendation Presentation by Bob Tumilty	2:30 – 3:45
4.	15 minute break	3:45 – 4:00
5.	Requested Upgrades With and Without A Transmission Service Request Presentation by Mike Proctor	4:00 – 4:45
6.	Firm Transmission Service Rights for resale for secondary use Presentation by Robert Pennybaker	4:45 – 5:30

Kansas Electric Transmission Authority

Larry Holloway
Kansas Corporation Commission

Kansas HB 2263

- Established the Kansas Electric Transmission Authority (KETA)
  - Passed by the Kansas House and Senate on March 31, 2005
  - Signed by the Governor on April 18, 2005
- Modeled after the Wyoming Infrastructure Authority
  - Established in 2004
  - Director hired in 2005
  - On August 27, 2005 issued $34.5 million in bonds to help finance $50 million HV upgrade for Basin Electric Power Cooperative

KETA Members

- Seven member board of directors
- Four are legislative
  - Chair and Ranking Minority Member of both House and Senate Utilities Committees
- Three members appointed by the Governor
  - Approved by the Senate
  - Four year staggered terms
  - Appropriate college degrees or At least 5 years management experience in electric generation or transmission development
  - Kansas voters
  - No more than 2 from any political problems

KETA Mission

"The purpose for which the Kansas electric transmission authority is created is to further ensure reliable operation of the integrated electrical transmission system, diversify and expand the Kansas economy and facilitate the consumption of Kansas energy through improvements in the state's electric transmission infrastructure."

KETA Authority

- Construct, finance, acquire, partner, on electric transmission facilities
  - 115 KV and greater
- Contract for operation and maintenance
- Acquire land, easements and right of way
- Participate in Regional Transmission Owner (SPP or successor) Proceedings
  - Considered a “public utility” under Kansas law

KETA Revenue

- 60 month loan from Kansas state general fund for startup
- KDFA financing (Kansas Development Finance Authority)
  - Tax free bond financing
- Inclusion in SPP/FERC transmission tariff cost recovery
- Collaboration with other partners
- Assessment on Kansas retail customers

KETA projects

- Must be approved by SPP (or its successor) AND must be recognized by a Kansas state agency as providing economic benefits from Kansas
- The majority of the project must be in Kansas
- Other entities must first be given an opportunity to construct the project
  - KETA cannot fund project if TO volunteers to do it within 90 days and takes action within an additional 180 days

KCC Responsibilities

- Transmission siting and safety
- Review proposal costs and benefits
- Verifies that projects meet SPP approval and stage agency recommendation requirements
- Verify project provides adequate benefits
- Recovery of any remaining revenue from Kansas retail customers by beneficiary
  - Amount not recovered in transmission rates
  - Requires the Commission to determine who benefits
  - Rate design left to the Commission

Additional Information

- First attempt at meeting on Monday, September 19, 2005
- See the following link for a full text of legislation:

http://www.kslegislature.org/bills/2006/2263.pdf

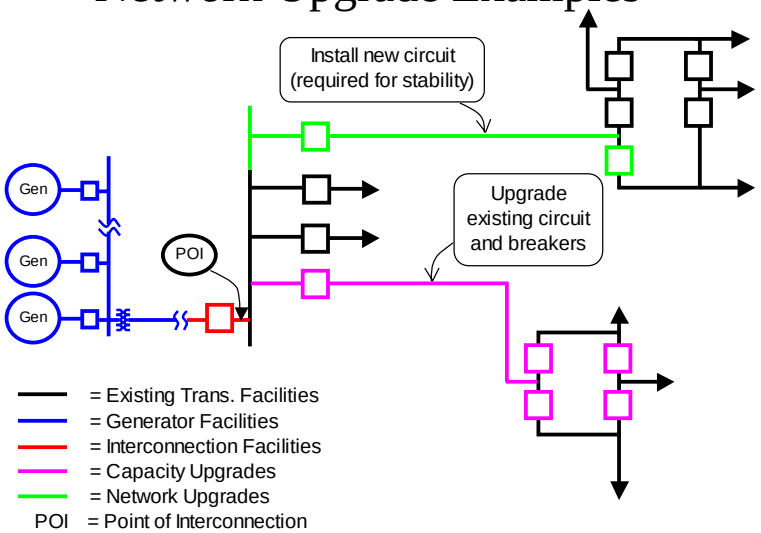
Interconnection Cost Allocation Presentation

SPP LGIA Task Force

9-28-2005

1

Interconnection Facility and Network Upgrade Examples



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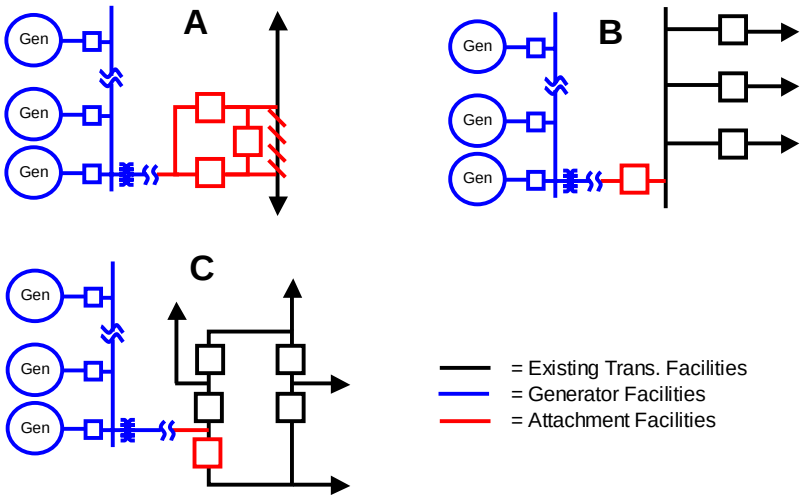
Interconnection Facility Examples



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What has FERC said about allocation of generator Interconnection Facility costs?

4

FERC Order 2003-C LGIA

Interconnection Facilities shall mean the Transmission Provider's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

5

Interconnection Facilities Costs

Interconnection Customer Interconnection Facilities. Interconnection Customer shall design, procure, construct, install, own and/or control Interconnection Customer Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.

Transmission Provider's Interconnection Facilities. Transmission Provider or Transmission Owner shall design, procure, construct, install, own and/or control the Transmission Provider's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the Interconnection Customer.

6

Summarizing Interconnection Facility Cost:

- Interconnection Facilities are on the generator side of the Point of Interconnection
- Directly assign IF cost to the Interconnection Customer

7

What has FERC said about allocation of Network Upgrade costs for generator interconnections?

8

Network Upgrades

Network Upgrades shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System to accommodate the interconnection of the Large Generating Facility to the Transmission Provider's Transmission System.

9

Point of Interconnection

Point of Interconnection shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Facilities connect to the Transmission Provider's Transmission System.

10

For Non-Independent Transmission Providers (Transmission Owners not in an RTO/ISO):

- Can not directly assign network upgrades to Interconnection Customers
  - Tampa Electric 99 FERC 61,192, 99 FERC 61,797
  - Nevada Power 111 FERC 61,161
  - Entergy 98 FERC 61,023

11

The Next Few Slides Apply to Independent Transmission Providers:

12

Old Dominion Elec. Coop vs. PJM

112 FERC 61,094

7. In Order Nos. 2003 and 2003-A, the Commission made an exception to its policy of prohibiting the direct assignment of Network Upgrade costs in cases where the Transmission Provider is independent of market participants. The Commission stated that it would continue to allow flexibility regarding the interconnection pricing policy for an independent Transmission Provider such as a Regional Transmission Organization (RTO) or an Independent System Operator (ISO), subject to Commission approval. Although the Commission adopted an approach for independent entities that differed from the crediting approach applied to non-independent entities, the Commission explained that it was not abandoning the goals that it had established for interconnection pricing, and that the policy applied to independent entities did not result in prohibited "and" pricing. Unlike a non-independent Transmission Provider, an independent Transmission Provider has no incentive to use the cost determination and allocation process to unfairly advantage its own generation. Under the right circumstances, a well-designed and independently administered participant funding policy for Network Upgrades offers the potential to provide more efficient price signals and a more equitable allocation of costs than the crediting approach.

13

Old Dominion Elec. Coop vs. PJM

(continued)

Further, under the transmission pricing policies that the Commission has permitted an RTO or ISO with locational pricing, in which the Interconnection Customer bears the cost of all facilities and upgrades, which would not be needed "but for" the interconnection of the new Generating Facility, the Interconnection Customer receives transmission and congestion rights in return, as well as access to the network. Finally, when the Interconnection Customer bears the cost of all facilities and upgrades, which would not be needed "but for the interconnection of the new Generating Facility, these are acceptable forms of participant funding and are not "and" pricing. Even if the Interconnection Customer or its power sales customer subsequently is required to pay an embedded, cost-based transmission charge, this is not "and" pricing because the customer is not paying twice for the same service. Rather, as Order No. 2003 explained, the Interconnection Customer pays separate charges for separate services; it pays an access charge for transmission, which may involve an obligation to pay congestion charges, and in exchange for its "but for" payments, it receives capacity rights associated with the upgrades that provide some protection from having to pay the congestion charges.

14

Old Dominion Elec. Coop vs. PJM
(continued)

8 Therefore, the Commission has directly addressed the concerns raised by the complaint in Order No. 2003, *et al.*, and the relief requested here is inconsistent with Order No. 2003, *et al*., for the reasons stated therein. While parties made extensive filings in these proceedings, with one exception, these raise arguments that were addressed in the Order No. 2003 proceedings or by the Commission's orders addressing PJM's compliance filings to Order No. 2003.[7] The sole argument that was not directly addressed in Order No. 2003 is ODEC's argument that it should receive credits from PJM because it is both a transmission customer of the PJM system and an interconnection customer that is developing a new generating source. However, the fact that ODEC has multiple roles as a member of PJM does not obliterate the distinction between system improvements by PJM, in its role as an RTO, the incremental investments that must be made by an interconnection customer, or the related underlying concerns about efficiency in the location of additional generating capacity addressed by Order No. 2003. As pointed out by Conectiv and PJM, adopting ODEC's position would shift the cost of connecting its proposed generating capacity to the system as a whole. This provides a competitive cost advantage if the newer facility should decide to sell power into the PJM energy market.

15

FERC Order 2003-C

24 In Order No. 2003-B, we stated that our interconnection pricing policy continues to allow the Transmission Provider to charge the Interconnection Customer a transmission rate that is the higher of the incremental cost rate for Network Upgrades required to interconnect the Generating Facility and an embedded cost rate for the entire Transmission System (including the cost of the Network Upgrades). We further stated that, if a Transmission Provider (or any other interested party) believes that, for an actual interconnection, it faces circumstances where native load and other customers are not held harmless, it should make that demonstration in an actual transmission rate filing.[19]

[19] Order No. 2003-B at P 54-57

16

FERC Order 2003-B

54 Order No. 2003-A clarified that the Commission was not abandoning any of the fundamental principles that have long guided its transmission pricing policy. The Commission's interconnection pricing policy continues to allow the Transmission Provider to charge the Interconnection Customer a transmission rate that is the higher of the incremental cost rate for Network Upgrades required to interconnect the Generating Facility or an embedded cost rate for the entire Transmission System (including the cost of the Network Upgrades). Order No. 2003-A emphasized that this "higher of" policy ensures that other Transmission Customers, including the Transmission Provider's native load, will not subsidize Network Upgrades required to interconnect merchant generation.

55 On rehearing, petitioners raise concerns regarding the implementation of this policy and whether other customers are protected from having to bear the costs of Network Upgrades under all circumstances. Petitioners argue that they can devise certain hypothetical cases in which the Transmission Provider must either impose some new transmission costs on existing customers or violate the Commission's prohibition against "and" pricing.

17

FERC Order 2003-B

56 In response to these petitioners, we first reaffirm that an important objective of our interconnection pricing policy continues to be the protection of existing Transmission Customers, including the Transmission Provider's native load, from adverse rate implications associated with Interconnection Facilities and Network Upgrades required to interconnect a new Generating Facility. Despite the unsupported hypothetical generalizations of some petitioners, we have not been presented with any evidence that native load and other Transmission Customers cannot be held harmless under our existing pricing policy. If a Transmission Provider (or an existing Transmission Customer) believes that, for an actual interconnection, it faces circumstances where native load and other customers are not held harmless, it should make that demonstration in an actual transmission rate filing. The Transmission Provider must explain the facts of the case and the assumptions on which its calculation is based and provide evidentiary support. While we cannot envision any circumstances where our existing pricing policy will not fully protect native load and other Transmission Customers, we are willing to consider alternative pricing proposals under the facts of a specific case. We emphasize that the Transmission Provider bears the full burden of showing that any such proposal is just and reasonable and not unduly discriminatory or preferential, and is appropriate under the circumstances.

18

FERC Order 2003-B

57 Similarly, with regard to the calculation of incremental rates, we are not prescribing generic rules at this time. Rather, we invite the Transmission Provider, in the context of an actual interconnection agreement or transmission rate filing, to propose a calculation method that assigns appropriate cost responsibility to the Interconnection Customer and is consistent with applicable Commission policy and precedent.

19

FERC Order 2003-B

33 We strongly encourage policies that promote efficient investment decisions and protect native load and other Transmission Customers from having to bear the burden of the Interconnection Customer's Network Upgrade costs. Given these concerns, we continue to find that the Order No. 2003-A crediting policy provides a reasonable balance between the objectives of promoting competition and infrastructure development, protecting the interests of Interconnection Customers, and protecting native load and other Transmission Customers

20

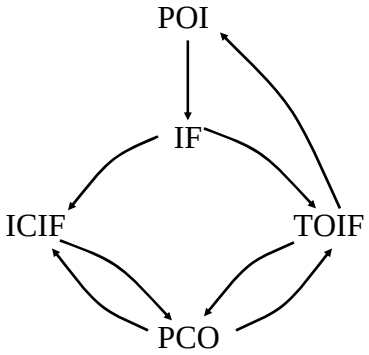
Summarizing Network Upgrade Costs:

- Network Upgrades are <u>all upgrades</u> on transmission system side of the Point of Interconnection
- Network Upgrade cost allocation options:
  - Spread to all users of the transmission system
  - Directly assign to the Interconnection Customer
  - Charge incremental rate
- Protect Native Load customers – they should not subsidize interconnection Network Upgrades
- Provide cost signal to the Interconnection Customer

21

Where is the Point of Interconnection (POI)?

Order 2003 definitions are circular:



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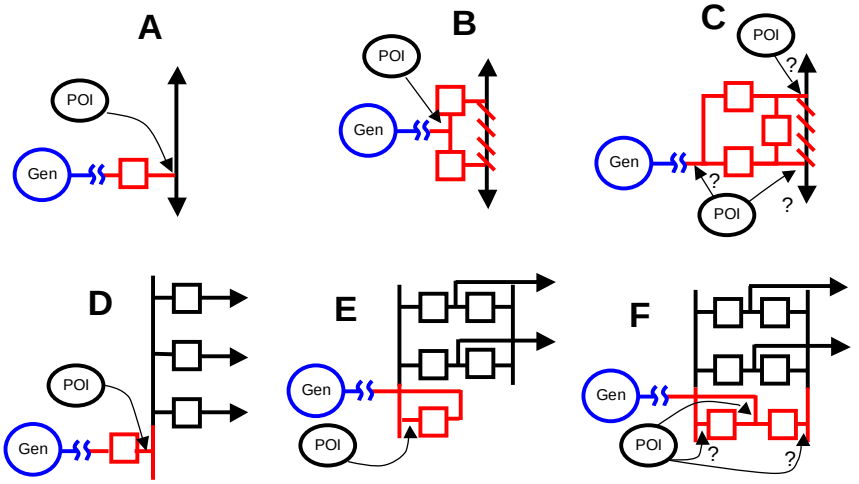
Point of Interconnection Examples



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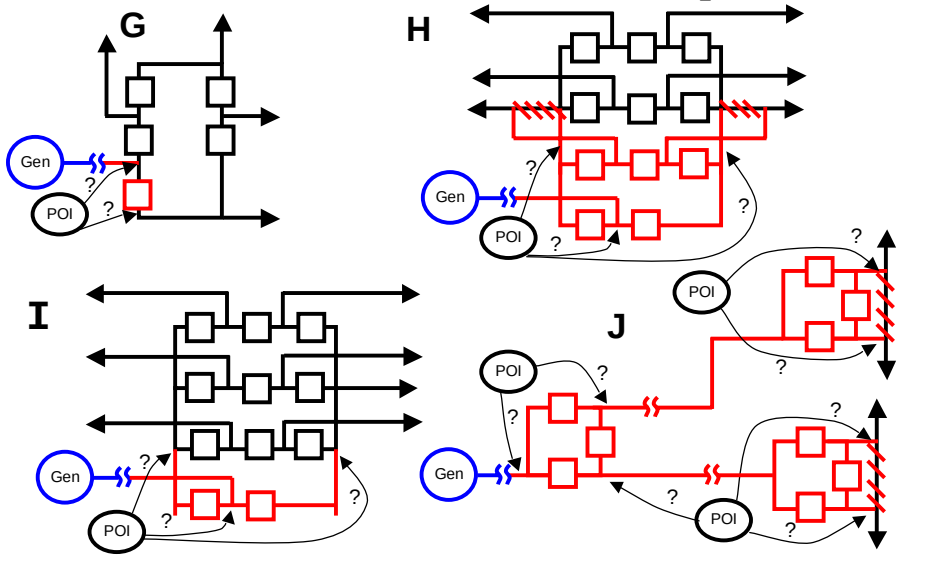
Point of Interconnection Examples



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We need a clear definition of Point of Interconnection

- Use examples (on previous slides)
- Use “sole use” definition
- Define Interconnection Facilities to be all facilities required for interconnection, thereby establishing POI on transmission side of Interconnection Facilities

25

Divide Network Upgrades* into Three Categories

- Attachment Facilities (AF) – required to attach to the transmission system
- Capacity Upgrades (CU) – required to allow the generator to operate at full output
- Network Upgrades (NU) – required to deliver to a particular POD

* KEEP IN MIND: Network Upgrades are on the transmission side of the Point of Interconnection

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Range of Options for Network Upgrade Cost Allocation

1. Regionalize AF, CU and NU
2. Directly assign AF cost to Interconnection Customer, regionalize CU and NU
3. Directly assign AF cost to Interconnection Customer, CU and NU are Requested Upgrades
4. Directly assign AF, CU and NU to Interconnection Customer

27

Key Questions

1. Does the allocation method impact total cost to be collected?
2. Which allocation methodology “holds native load customers harmless” as FERC Order 2003-C intends?
3. Which allocation methodology “promotes efficient investment decisions” as FERC Order 2003 B intends?

28

LGIP Task Force Recommendation

- Directly assign AF cost to Interconnection Customer, CU and NU are Requested Upgrades facilitated by the Aggregate Transmission Service Study process for delivery
- Modify pro-forma definitions to remove the circular definitions currently used under FERC 2003-C LGIA language. (Clarify Point of Interconnection location)

29

Direct Assignment as Defined in SPP OATT

1.10 Direct Assignment Facilities: Facilities or portions of facilities that are constructed by any Transmission Owner(s) for the sole use/benefit of a particular Transmission Customer or a particular group of customers or a particular Generation Interconnection Customer requesting service under the Tariff. Direct Assignment Facilities shall be specified in the Service Agreements that govern service to the Transmission Customer(s) and Generation Interconnection Customer(s) and shall be subject to Commission approval.

30

Risk Analysis

- If the Generator runs:
  - Total dollar impact is the same for all options, the only difference is which customer group pays
  - For directly assigned and requested upgrade costs, the generator's customers pay
  - For regionalized costs, all SPP customers pay

31

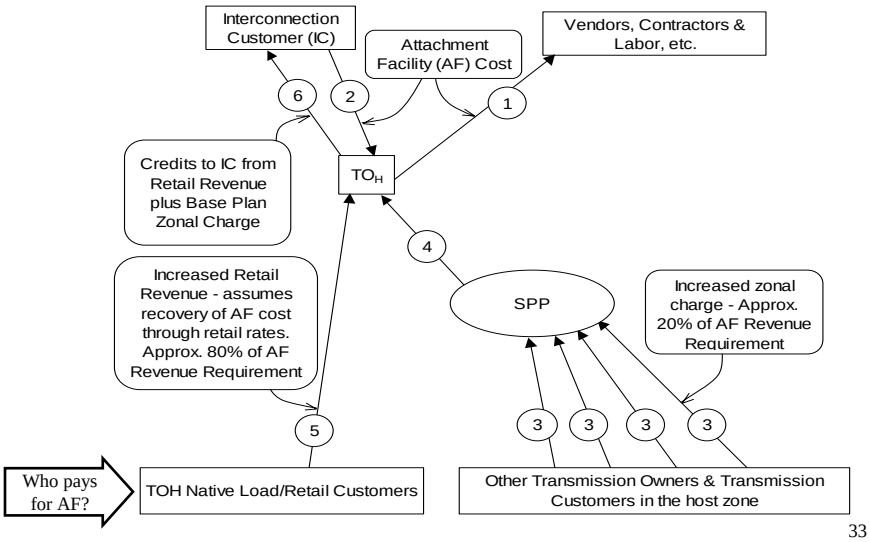
Risk Analysis

- If the Generator runs very little:
  - Regionalizing costs expose native load to paying for facilities that are not needed
  - For directly assigned and requested upgrade costs, native load customers are protected

32

ATTACHMENT FACILITY COST FLOW CHART

No Change in Current SPP Cost Allocation
100% of AF Cost Allocated to Host Transmission Owner



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ATTACHMENT FACILITY COST FLOW CHART

No Change in Current SPP Cost Allocation
100% of AF Cost Allocated to Host Transmission Owner

TO_H = Host Transmission Owner (where the generator is attached)

AF = Attachment Facilities = the facilities required to attach the generator to the transmission system.

① = Host Transmission Owner pays for the Attachment Facilities
② = IC reimburses Host Transmisison Owner for cost of the Attachment Facilities
③ = SPP collects transmission revenue from zonal charge increased by AF revenue requirement. (assumes regulatory approval is received)
④ = SPP allocates revenue from zonal charge
⑤ = Retail revenue increase to cover AF Rev. Reqmt. (assumes regulatory approval is received)
⑥ = Host TO returns credits to IC from retail charges and zonal revenue allocation

Revenue Requirement Example

Attachment Facility Cost	$3,000,000
Annual Revenue Requirement Factor	20%
Annual Revenue Requirement	$600,000
Revenue Requirement recovered through retail rates	$480,000
Revenue Requirement recovered through zonal charge	$120,000

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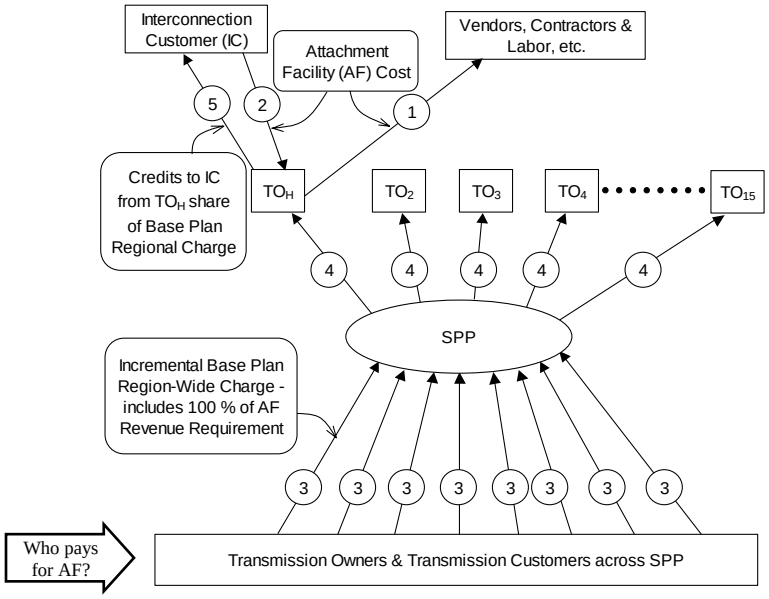
ATTACHMENT FACILITY COST FLOW CHART
Allocate 100% of AF Revenue Requirement to Base Plan Region-Wide Charge



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ATTACHMENT FACILITY COST FLOW CHART
Allocate 100% of AF Revenue Requirement to Base Plan Region-Wide Charge

TO_H = Host Transmission Owner (where the generator is attached)

AF = Attachment Facilities = the facilities required to attach the generator to the transmission system.

① = Host Transmission Owner pays for the Attachment Facilities
② = IC reimburses Host Transmisison Owner for cost of the Attachment Facilities
③ = SPP collects Base Plan Region-Wide Charge increased by AF Revenue Requirement
④ = SPP allocates revenue from Base Plan Region-Wide Charge
⑤ = Host TO returns credits to IC from Base Plan Region-Wide Charge revenue allocation

Revenue Requirement Example

Attachment Facility Cost	$3,000,000
Annual Revenue Requirement Factor	20%
Annual Revenue Requirement	$600,000

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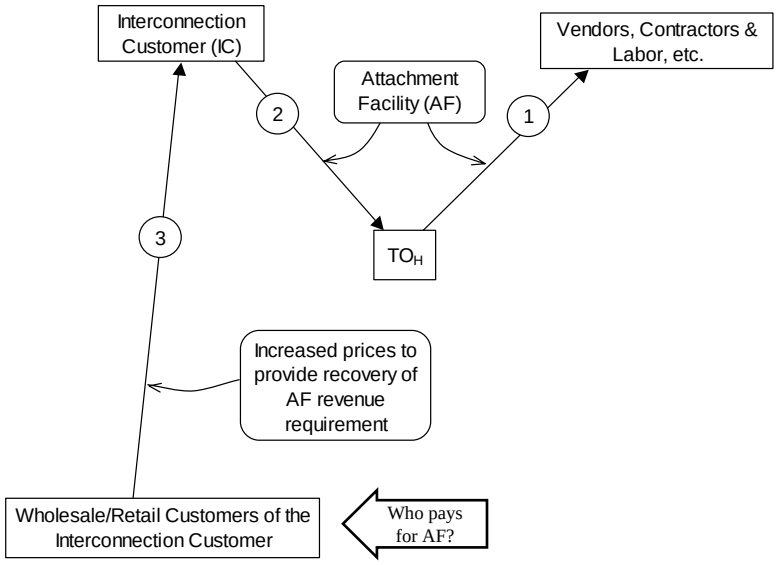
ATTACHMENT FACILITY COST FLOW CHART
Directly Assign AF Cost to Interconnection Customer



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ATTACHMENT FACILITY COST FLOW CHART
Directly Assign AF Cost to Interconnection Customer

TO_H = Host Transmission Owner (where the generator is attached)
AF = Attachment Facilities = the facilities required to attach the generator to the transmission system.

① = Host Transmission Owner pays for the Attachment Facilities
② = IC reimburses Host Transmisison Owner for cost of the Attachment Facilities
③ = IC charges higher rates to recover AF revenue requirement

Revenue Requirement Example

Attachment Facility Cost	$3,000,000
Annual Revenue Requirement Factor	20%
Annual Revenue Requirement	$600,000

38

Key Questions and Answers

1. Does the allocation method impact total cost to be collected? NO – it only determines which customer or group of customers pay
2. Which allocation methodology "holds native load customers harmless" as FERC Order 2003-C intends? Direct Assignment
3. Which allocation methodology "promotes efficient investment decisions" as FERC Order 2003 B intends? Direct Assignment

39

One More Question

4. Does Direct Assignment of 100 % of Attachment Facility Cost to the Interconnection Customer create a barrier to generation development?

40

Comparison of AF Cost to Total Project Cost

(Hypothetical Examples)

Low Attachment Facility (AF) Cost

	Small Combined Cycle	Wind	Large Combined Cycle	Large Coal
Capacity (MW)	25	150	500	1,000
Estimated $/kW	$500	$750	$500	$1,000
Est Proj. Cost* ($ Millions)	$13	$113	$250	$1,000
AF Cost ($ Millions)	$1.5	$2.0	$3.0	$5.0
Total Cost ($ Millions)	$14.0	$114.5	$253.0	$1,005.0
AF Cost % of Total	11%	2%	1%	0.5%

* Assumes that no Capacity Upgrades or Network Upgrades are required.

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Comparison of AF Cost to Total Project Cost

(Hypothetical Examples)

High Attachment Facility (AF) Costs

	Small Combined Cycle	Wind	Large Combined Cycle	Large Coal
Capacity (MW)	25	150	500	1,000
Estimated $/kW	$500	$750	$500	$1,000
Est Proj. Cost* ($ Millions)	$13	$113	$250	$1,000
AF Cost ($ Millions)	$5	$5	$7	$10
Total Cost ($ Millions)	$18	$118	$257	$1,010
AF Cost % of Total	29%	4%	3%	1%

* Assumes that no Capacity Upgrades or Network Upgrades are required.

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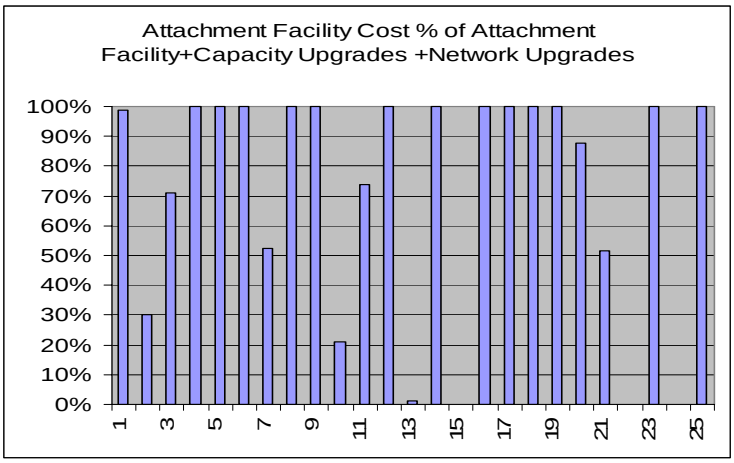
Attachment Facility Cost Percent of the Cost of Attachment Facility+Capacity Upgrades +Network Upgrades

(Examples from SPP Interconnection Requests)



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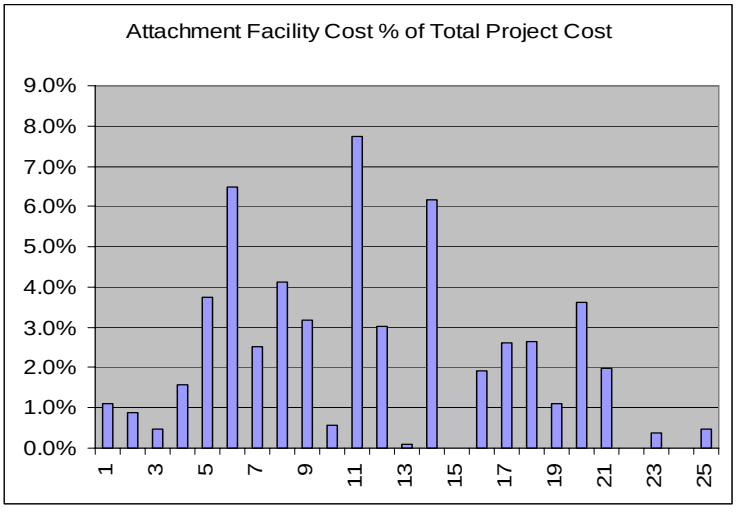
Attachment Facility Cost Percent of Total Project Cost

(Examples from SPP Interconnection Requests)



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Analysis of Attachement Facility (AF) Cost for SPP Interconnection Requests

Case	AF Cost ($millions)	CU+NU Cost ($Millions)	Total AF+CU+NU ($Millions)	AF % of AF+CU+NU	Capacity MW	Avg $/MW	Estimated Project Cost ($millions)	Project+AF +CU+NU ($millions)
1	$ 0.11	$ 0.00	0.11	99%	20	500	$ 10.00	$ 10.11
2	$ 4.72	$ 11.00	15.72	30%	520	1000	$ 520.00	$ 535.72
3	$ 2.47	$ 1.00	3.47	71%	520	1000	$ 520.00	$ 523.47
4	$ 1.20	$ -	1.20	100%	149	500	$ 74.50	$ 75.70
5	1.87	$ -	1.87	100%	96	500	$ 48.00	$ 49.87
6	$ 0.90	$ -	0.90	100%	26	500	$ 13.00	$ 13.90
7	$ 4.79	$ 4.36	9.15	52%	240	750	$ 180.00	$ 189.15
8	$ 3.45	$ -	3.45	100%	160	500	$ 80.00	$ 83.45
9	$ 4.10	$ -	4.10	100%	250	500	$ 125.00	$ 129.10
10	$ 5.30	$ 20.02	25.32	21%	900	1000	$ 900.00	$ 925.32
11	$ 10.00	$ 3.54	13.54	74%	155	750	$ 115.88	$ 129.42
12	$ 3.50	$ -	3.50	100%	150	750	$ 112.50	$ 116.00
13	$ 0.70	$ 47.05	51.60	1%	800	1000	$ 800.00	$ 851.60
14	$ 2.00	$ -	2.00	100%	40.5	750	$ 30.38	$ 32.38
15	$ -	$ -	0.00	-	27	750	$ 20.25	$ 20.25
16	$ 2.20	$ -	2.20	100%	150	750	$ 112.50	$ 114.70
17	$ 1.20	$ -	$ 1.20	100%	60	750	$ 45.00	$ 46.20
18	$ 4.10	$ -	4.10	100%	201	750	$ 150.75	$ 154.85
19	$ 1.66	$ -	1.66	100%	201	750	$ 150.75	$ 152.41
20	$ 2.27	$ 0.32	2.59	88%	80	750	$ 60.00	$ 62.59
21	$ 3.84	$ 3.61	7.45	52%	250	750	$ 187.50	$ 194.95
22	$ -	$ -	$ -	-	18	750	$ 13.50	$ 13.50
23	$ 0.44	$ -	$ 0.44	100%	150	750	$ 112.50	$ 112.94
24	$ -	$ 1.00	$ -	-	18	750	$ 13.50	$ 13.50
25	$ 0.47		$ 0.47	100%	130.5	750	$ 97.88	$ 98.35

AF = Attachment Facilities CU = Capacity Upgrades NU = Network Upgrades

45

One More Question

4. Does Direct Assignment of 100 % of Attachment Facility Cost to the Interconnection Customer create a barrier to generation development?

   AF Cost is typically less than 5% of the total project cost. Other factors are more likely to drive the success or failure of the project. Direct assignment of the cost does not preclude the Interconnection customer from recovering the cost through power sales.

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Transmission Upgrade Requests With and Without Transmission Service Requests

CAWG Meeting

September 27, 2005

Mike Proctor

Transmission Upgrade Requests

1. Upgrades Associated with a request for Transmission Service
   - Network Service
   - LT PTP Service
2. Exports: Capacity upgrades for deliverability from a generator
3. Imports: Capacity upgrades for deliverability to a load

2

Transmission Upgrades Associated with Network Service

- Reliability upgrades associated with load growth:
  - Included in SPP Base Plan.
- Reliability upgrades associated with New or Changed Designated Network Resource:
  - Submitted as a requested DNR.
  - Included in Base Plan Funding – with specified limits.

3

Transmission Upgrades Associated with LT PTP Service

- Designated Resource to serve load
  - Submitted as a requested for new designated resource
  - Included in Base Plan Funding – with specific limits.
- Transmission path for through or out service or Transmission path for economy transactions.
  - Submitted as a transmission service request under Attachment Z
  - Includes revenue credits for PTP use by other transmission customers.

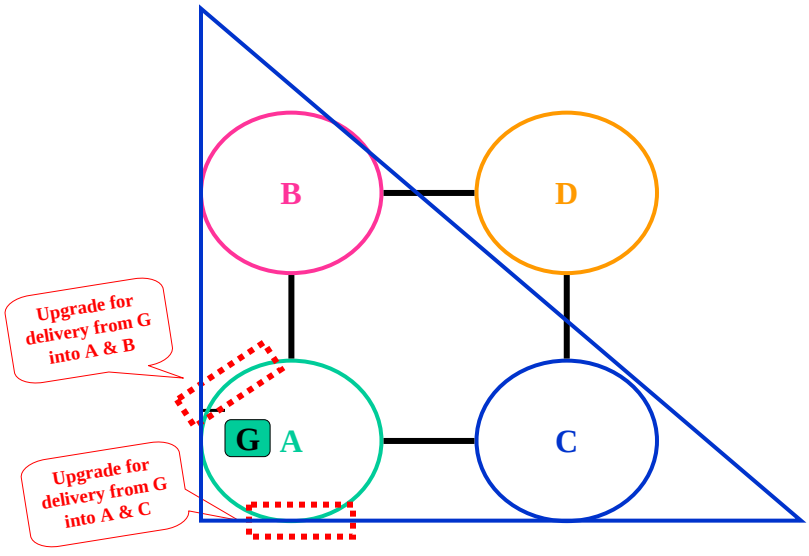
4

Exports: Capacity Upgrades for Delivery from Generator to Market

- Focus is on **Market-Based Generation**
  - Generation that does not have a contract to serve SPP load as a Designated Resource or PTP transmission service out of SPP.
- Would include upgrades necessary for the generator to supply full capacity into the grid.
  - Such upgrades are likely to be nearby restrictions.
  - Ex: Redbud wants to fund upgrades that would allow it to supply its full generation into the SPP during peak seasons, but does not want to take LT PTP Transmission Service for the entire year.
- Could also include additional upgrades to eliminate bottlenecks into a specific market.
  - This could also be requested as LT PTP, but if not desired for an entire year, the generator may not want LT PTP service.

5

Capacity Upgrades To Deliver Full Generator Output



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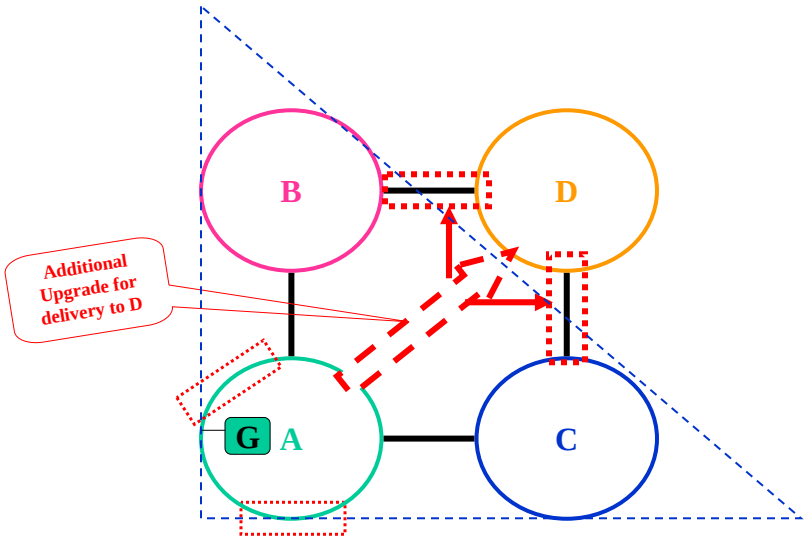
Additional Capacity Upgrades to Deliver to a Specific Market



7

Exports: Requested Capacity Upgrades from A Generator

- Does Attachment Z require that the Generator take transmission service?
  - If so, the LGIA Task Force recommendation for separating out capacity upgrades is not a viable alternative for Market-Based generation.
    - Moreover, Attachment Z provides generators with revenue credits for capacity upgrades that are no longer included in the generator interconnection.
    - These revenue credits are the SPP version of PJMs assignment of ARRs to generators that fund capacity upgrades. The generator need not take transmission service to be allocated these ARRs.
    - Requiring the generator to take LT PTP service can impose a cost that is higher than the cost of the desired upgrades.
  - If not, should the language in Attachment Z be clarified?

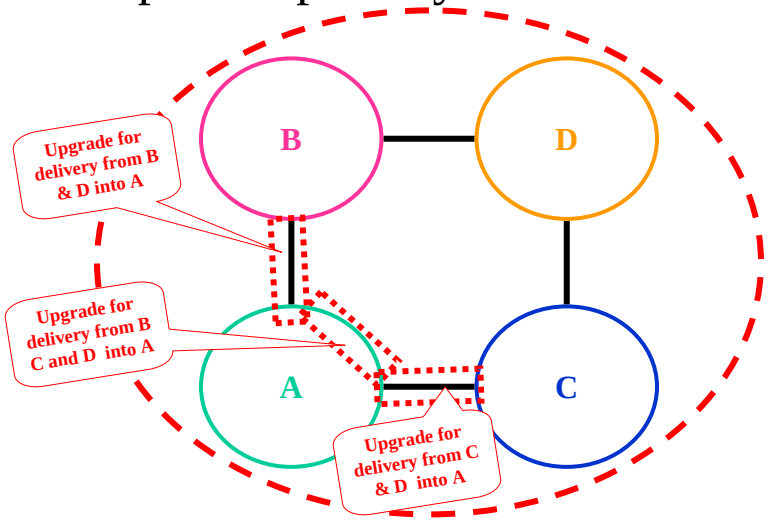
8

Imports: Capacity Upgrades for Delivery to a Specified Load

- Focus is on **Economy Purchases of Energy**
  - A load-serving entity has own capacity to serve load, but wants access to lower cost energy and is willing to make an investment in the transmission system to obtain that access.
- Could include upgrades necessary to eliminate transmission bottlenecks into a specific area.
  - If a portion of a load area is narrowly constrained, the load-serving entity may want to upgrade transmission in order to eliminate the congestion into that area.
    - This upgrade could be to eliminate non-economic dispatch to load pocket
    - This upgrade could also be to increase the import capability into a utility's load service area.
- Could also include upgrades to reduce congestion to multiple load-serving entities.
  - Could involve multiple load-serving entities that want to reduce energy costs in a specific region of the SPP, perhaps for only a season (e.g., summer shoulder period)

9

Capacity Upgrades to Improve Import Capability Into a Load Area



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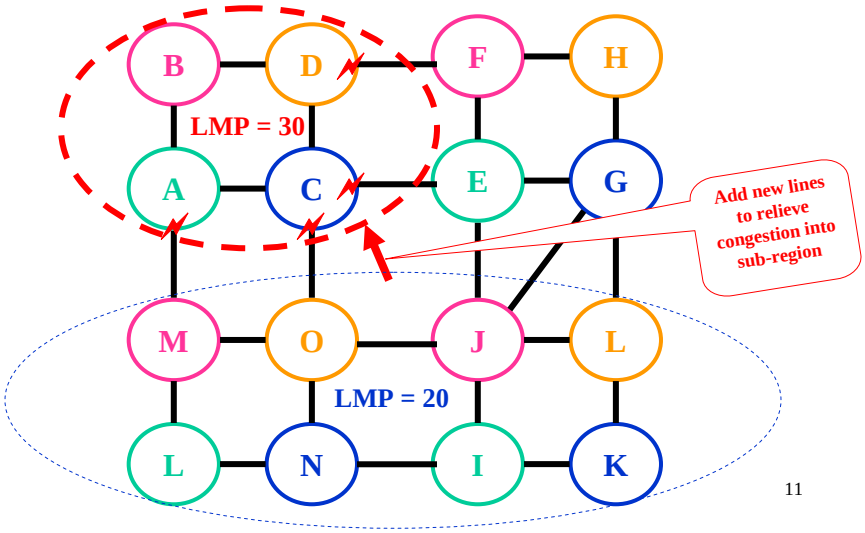
Capacity Upgrades to Improve Import Capability Into Multiple Load Areas



11

Imports: Requested Capacity Upgrades for Delivery to a Load or Group of Loads.

- Does Attachment Z require that the Load take transmission service?
  - If so, how does this differ from a Generator request for a capacity upgrade?
    - Requiring the load to take LT PTP service can impose a cost that is higher than the cost of the desired upgrades.
    - If the cost of LT PTP is at or below the cost of the desired upgrades, then is there still a problem?
  - If not, should the language in Attachment Z be clarified?

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