

The background of this slide is a blurred image of a power transmission tower, similar to the one in the top image, but with a strong horizontal motion blur effect. The left side of the slide has a vertical gradient from dark brown at the bottom to light yellow at the top.

 **SPP**

**Transmission  
Expansion  
Cost Allocation  
Proposal**

**Economic Upgrades  
CAWG Meeting  
October 12, 2004**

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## Overview

- ❖ Purpose of this presentation is to summarize CAWG proposal for cost allocation of economic upgrade projects
- ❖ CAWG distributed discussion paper October 8, 2004
  - ◆ Key elements summarized
  - ◆ Two alternative approaches discussed in paper
- ❖ Today's presentation reviews modifications to voluntary funding approach discussed in October 8<sup>th</sup> paper

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## Project Classifications

- ❖ Base Plan Upgrades – are those upgrades necessary to meet long-term reliability requirements as defined in the Straw Proposal
- ❖ Economic upgrades – are projects that are proposed and evaluated as part of SPP planning cycle; these projects are eligible for economic upgrade funding as described in straw proposal being discussed today
- ❖ Requested upgrades – are projects that are requested and evaluated as part of the transmission service request queue (e.g. the Attachment Z process); these projects are not eligible for the economic upgrade funding described in proposal.
- ❖ Generator Interconnection – are interconnection requests that are processed via SPP's implementation of Order 2003-A.

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## Issues that Must be Addressed

- ❖ In the October 8th paper, the CAWG listed the key issues that must be addressed to form a proposal for economic upgrade cost allocation:
  - ◆ Mandatory vs. voluntary funding approach
  - ◆ Method for identifying beneficiaries
  - ◆ Regional contribution
    - \* Should there be any?
  - ◆ Net benefit threshold
    - \* How will the net benefit of a project be measured and what is the minimum level that must be demonstrated?
  - ◆ Transmission rights
    - \* What rights will a party receive for funding an economic upgrade project?

## Stakeholder Comments on Economic Upgrade Funding

- ❖ Examples of some specific comments received:
  - ◆ Parties voluntarily requesting an economic upgrade should fund it directly and there should be no credit mechanism
  - ◆ Parties that fund economic upgrades should be eligible to receive some form of revenue credits similar to Order 2003-A.
  - ◆ Set the regional allocation factor at a fixed value and review periodically
  - ◆ Set the regional allocation factor based on the potential net benefits of the proposed project
  - ◆ Link this value to the avoided reliability upgrade costs the economic project permits



## Oct 8<sup>th</sup> Paper Voluntary Funding Approach

- ❖ October 8<sup>th</sup> paper included variation on initial straw proposal
- ❖ Projects are voluntarily funded
- ❖ Parties decide how project costs will be allocated amongst themselves
- ❖ Cost allocation of Economic Upgrades
  - ◆ Parties must at least fund upgrade capacity necessary to meet requested service (Y%)
  - ◆ (100-Y)% through a single region-wide SPP rate MAY be funded only if incremental benefits exceed costs being rolled in
- ❖ To be eligible for regional contribution, project must pass pre-defined net benefit threshold
- ❖ Funding parties would receive transmission rights as outlined in initial straw proposal

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## Concerns Raised Regarding Approach 1 Proposal

- ❖ If voluntary funding approach is taken, should there be any regional contribution at all?
  - ◆ Free-rider consideration
  - ◆ Would this make a portion of the upgrade quasi-mandatory?
- ❖ Could parties game this partial funding approach?
- ❖ How would the regional benefits be calculated? How would you determine the “excess” capacity not used by the project sponsors?
- ❖ Would customers paying the regional contribution receive any form of transmission rights?

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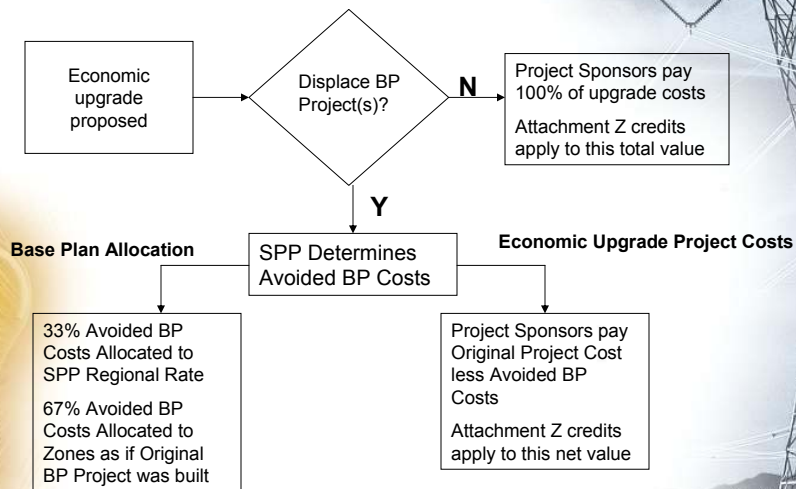
## Revised Proposal

- ❖ **Projects are voluntarily funded by Project Sponsors**
  - ◆ SPP may identify potential projects and projected beneficiaries but nothing is binding
  - ◆ Project sponsors decide how project costs will be allocated amongst themselves;
- ❖ **Regional contribution**
  - ◆ Economic upgrades that allow SPP to avoid specific reliability base plan projects will be eligible for a form of regional contribution (discussed next slide)
- ❖ **Net benefit threshold is determined by the project sponsors**
- ❖ **Transmission rights and revenue credits will be governed by the mechanisms proposed under Attachment Z**

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## Regional Contribution for Economic Upgrades



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## **Related Points on Regional Contribution**

- ❖ **Avoided costs are capped at original costs of approved Base Plan project**
  - ◆ **Only comes into play if costs to build economic upgrade facilities are higher than original base plan facilities**
  - ◆ **Example: Assume approved BP includes Project A at cost of \$2M; Proposed economic upgrade project total cost is \$10M but would also eliminate need to build Project A; only \$2M of the proposed economic upgrade costs would be eligible to be base funded.**
- ❖ **The zonal allocation of the avoided costs is determined as if the original approved BP was being built**



## **Transmission Rights and Revenue Crediting proposal**

- ❖ **Parties funding economic upgrades will receive the transmission service they request**
- ❖ **Parties funding economic upgrades will receive a revenue credit associated with facilities they fund**
- ❖ **Revenue credits will be calculated using the mechanism proposed in Attachment Z currently filed at FERC**
  - ◆ **Parties funding upgrade eligible to receive revenues resulting from PTP sales that use facilities**





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# Base Plan Funding

## X-Factor and Zonal Limits



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Larry Holloway, KCC

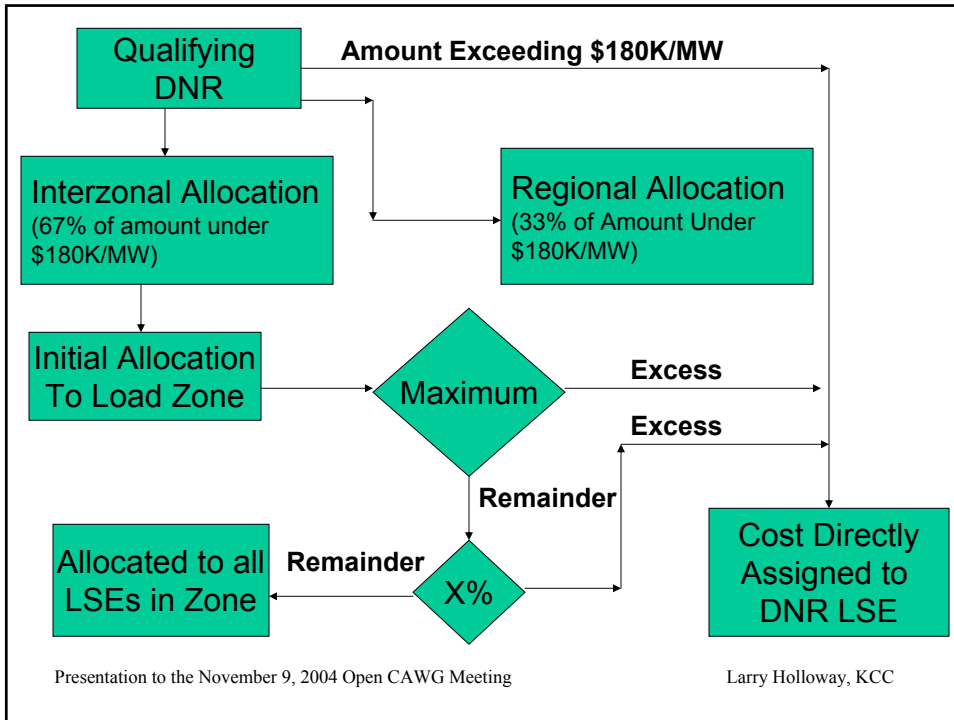
## Adjustments to the Base Plan

- DNR qualifies under the base plan
  - Five years or more,  $\leq 125\%$  peak load
- Up to \$180K/MW is funded under the base plan
  - Requestor funds excess
  - **TO Retail Load Treated the Same as a TDU Load!**
  - **All Load in Zone is Part of an LSE!**
- 33% funded Regionally
- 67% Allocated zonally
  - SPP MW Mile
- If the zonal allocation in the DNR load zone causes load zone rates to increase more than X% - The DNR requestor will be directly assigned the costs above X%
- Additionally, a zonal allocation maximum has been discussed

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Company	Attachment H SPP RTO Filing	Peak Loads Given in MW for Each Control Area				
		2004 EIA Peak Load	ALL TDUs Peak Load	Largest TDU Peak Load	Average TDU Peak Load	Median TDU Peak Load
AEP West (SOEP & PSOK)	\$88,681,579	8,581	1,938	354	92	65
Cleco	\$29,328,000	1,750	165	160	41	2
Springfield	\$8,651,509	726	NA	NA	NA	NA
Empire	\$14,075,000	1,048	160	54	23	18
GRDA (est)	\$24,589,256	1,422	1,422	151	68	43
KCPL	\$35,461,776	3,449	177	42	14	10
OGE	\$65,065,032	5,650	147	84	15	3
MWE	\$4,197,347	283	15	12	8	8
MoPub	\$18,884,642	1,746	112	27	8	5
SWAPA	\$4,922,300	684	684	248	62	75
SPS	\$64,200,000	4,331	1,364	334	85	60
Sunflower	\$19,637,429	410	468	148	22	6
WFEC	\$20,719,639	1,157	1,474	205	28	9
Westar (KAPL & KAGE)	\$66,491,775	4,404	915	124	11	5
WPE	\$15,728,043	567	220	32	7	4

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		<sup>1</sup> Maximum MW DNR Change in Zone before given zone rate increase			
Company	Attachment H SPP RTO	1%	3%	5%	10%
AEP West (SOEP & PSOK)	\$88,681,579	49	147	245	490
Cleco	\$29,328,000	16	49	81	162
Springfield	\$8,651,509	5	14	24	48
Empire	\$14,075,000	8	23	39	78
GRDA (est)	\$24,589,256	14	41	68	136
KCPL	\$35,461,776	20	59	98	196
OGE	\$65,065,032	36	108	180	359
MWE	\$4,197,347	2	7	12	23
MoPub	\$18,884,642	10	31	52	104
SWAPA	\$4,922,300	3	8	14	27
SPS	\$64,200,000	35	106	177	355
Sunflower	\$19,637,429	11	33	54	108
WFEC	\$20,719,639	11	34	57	114
Westar (KAPL & KAGE)	\$66,491,775	37	110	184	367
WPE	\$15,728,043	9	26	43	87

Note 1: Capital expenditure limit is \$180K/MW, 33% regional leaves \$120.6K/MW Zonal 15% carrying costs equates to \$18.1K/MW annual revenue requirements

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Limit	Number of TDUs in Control Area Whose Peak Load Could Exceed the Limit, based upon 67% of \$180,000/MW						
	\$20,000,000	\$25,000,000	\$30,000,000	\$35,000,000	\$40,000,000	\$45,000,000	\$50,000,000
<b>DNR Change in MW</b>	166	207	249	290	332	373	415
AEP West (SOEP & PSOK)	4	3	3	1	1	0	0
Cleco	0	0	0	0	0	0	0
Springfield	NA	NA	NA	NA	NA	NA	NA
Empire	0	0	0	0	0	0	0
GRDA (est)	0	0	0	0	0	0	0
KCPL	0	0	0	0	0	0	0
OGE	0	0	0	0	0	0	0
MWE	0	0	0	0	0	0	0
MoPub	0	0	0	0	0	0	0
SWAPA	1	1	0	0	0	0	0
SPS	2	1	1	1	1	0	0
Sunflower	0	0	0	0	0	0	0
WFEC	2	0	0	0	0	0	0
Westar (KAPL & KAGE)	0	0	0	0	0	0	0
WPE	0	0	0	0	0	0	0

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Projects Needed By		Summer 2005		2006 - 2010 Projects								Direct Assign TOTAL		Base Plan TOTALS	
Transmission Projects		Substation Projects		Direct Assign <=100k		Base Plan >100k		Base Plan(with MW-miles)		Direct Assign TOTAL		Base Plan TOTALS			
Company	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	
SWPA	1	\$ 700,000					3	\$ 5,840,000			1	\$ 700,000	3	\$ 5,840,000	
AEPW	19	\$ 57,894,100	5	\$ 2,765,000		8	\$ 613,000	7	\$ 15,527,000	3	\$ 47,367,225	32	\$ 61,272,100	10	\$ 62,894,225
GRDA	7	\$ 9,880,000	1	\$ 500,000						1	\$ 1,500,000	8	\$ 10,380,000	1	\$ 1,500,000
OKGE	14	\$ 31,250,000	2	\$ 263,000		4	\$ 250,000	11	\$ 21,826,000	1	\$ 9,000,000	20	\$ 31,763,000	12	\$ 30,826,000
WFEC	3	\$ 1,050,000	3	\$ 432,000								6	\$ 1,482,000	0	\$ -
SPS	25	\$ 87,690,000	11	\$ 45,750,000						2	\$ 16,350,000	36	\$ 133,440,000	2	\$ 16,350,000
MIDW												0	\$ -	0	\$ -
WERE	9	\$ 15,583,000	1	\$ 400,000				2	\$ 10,600,000	2	\$ 9,284,000	10	\$ 15,983,000	4	\$ 19,884,000
KCPL	7	\$ 4,702,000				6	\$ 111,000	1	\$ 1,256,000	3	\$ 13,759,000	13	\$ 4,813,000	4	\$ 15,015,000
EMDE	4	\$ 2,850,000	2	\$ 144,000				1	\$ 240,000	2	\$ 5,760,000	6	\$ 2,994,000	3	\$ 6,000,000
SPRM	1	\$ 400,000	2	\$ 6,900,000				2	\$ 4,000,000			3	\$ 7,300,000	2	\$ 4,000,000
CLEC	1	\$ 300,000	1	\$ 200,000								2	\$ 500,000	0	\$ -
Lafa	1	\$ 700,000										1	\$ 700,000	0	\$ -
LEPA												0	\$ -	0	\$ -
OMPA												0	\$ -	0	\$ -
SUNC	2	\$ 5,500,000	3	\$ 3,400,000				6	\$ 9,601,000			5	\$ 8,900,000	6	\$ 9,601,000
WEPL												3	\$ 5,600,000	0	\$ -
MIPU	10	\$ 11,810,000	1	\$ 250,000				1	\$ 2,070,000			11	\$ 12,060,000	1	\$ 2,070,000
BPU												0	\$ -	0	\$ -
INDN												0	\$ -	0	\$ -
<b>TOTALS</b>	<b>104</b>	<b>\$230,309,100</b>	<b>35</b>	<b>\$ 66,604,000</b>		<b>18</b>	<b>\$ 974,000</b>	<b>34</b>	<b>\$ 70,960,000</b>	<b>14</b>	<b>\$ 103,020,225</b>	<b>157</b>	<b>\$ 297,887,100</b>	<b>48</b>	<b>\$173,980,225</b>
<b>SPP Transmission Owners Only</b>															
	Fixed	Load	Att H	Ann rev Req \$		Ann Rev Req \$		Ann Rev Req \$		Ann Rev Req					
	Charge	Ratio	Ann rev Req	with Direct \$	%	Direct+Base Plan\$	%	Existing method	%	\$ Difference	%				
	Rate	Share	Dollars	Dollars	Incrs	Dollars	Incrs	Dollars	Incrs	Exist-BasePlan	Change				
SWPA	6.62%	2.0%	\$ 4,922,300	\$ 4,968,640	0.9%	\$ 5,338,940	7.5%	\$ 5,355,248	8.8%	\$ 16,308	0.3%			Southwestern Power Administration	
AEPW	12.86%	26.0%	\$ 88,861,579	\$ 96,741,171	8.9%	\$ 104,040,048	7.5%	\$ 104,829,368	18.0%	\$ 789,320	0.8%			AEP West	
GRDA	10.95%	4.0%	\$ 24,589,256	\$ 25,725,866	4.6%	\$ 26,218,441	1.9%	\$ 25,890,116	5.3%	\$ (328,325)	-1.3%			Grand River Dam Authority	
OKGE	11.10%	17.0%	\$ 65,065,032	\$ 68,590,725	5.4%	\$ 71,065,098	3.6%	\$ 72,012,411	10.7%	\$ 947,313	1.3%			OG+E	
WFEC	4.41%	4.0%	\$ 20,719,639	\$ 20,784,995	0.3%	\$ 20,998,871	1.0%	\$ 20,784,995	0.3%	\$ (213,876)	-1.0%			Western Farmers Electric Coop	
SPS	12.72%	15.0%	\$ 64,200,000	\$ 81,173,568	26.4%	\$ 84,502,839	4.1%	\$ 83,253,288	29.7%	\$ (1,249,551)	-1.5%			Southwestern Public Service	
MIDW	5.00%	1.0%	\$ 4,197,347	\$ 4,197,347	0.0%	\$ 4,251,693	1.3%	\$ 4,197,347	0.0%	\$ (54,346)	-1.3%			Midwest Energy	
WERE	12.53%	15.0%	\$ 66,491,775	\$ 68,494,445	3.0%	\$ 71,339,329	4.2%	\$ 70,985,910	6.8%	\$ (353,419)	-0.5%			Westar Energy	
KCPL	12.50%	11.0%	\$ 35,451,776	\$ 36,053,401	1.7%	\$ 38,274,529	6.2%	\$ 37,930,276	7.0%	\$ (344,253)	-0.9%			Kansas City Power & Light	
EMDE	11.52%	3.0%	\$ 14,075,000	\$ 14,419,909	2.5%	\$ 15,058,692	4.4%	\$ 15,111,109	7.4%	\$ 52,416	0.3%			Empire District Electric	
SPRM	8.93%	2.0%	\$ 8,651,509	\$ 9,303,399	7.5%	\$ 9,643,519	3.7%	\$ 9,660,599	11.7%	\$ 17,080	0.2%			City of Springfield	
<b>TOTALS</b>		<b>100.0%</b>	<b>\$ 397,225,213</b>	<b>\$ 430,453,466</b>	<b>8.4%</b>	<b>\$ 450,731,999</b>	<b>4.7%</b>	<b>\$ 450,010,667</b>	<b>13.3%</b>	<b>\$ (721,332)</b>	<b>-0.2%</b>				
<b>Projects Needed By Summer 2005</b>															
Summer 2005		Substation Projects		Direct Assign <=100k		Base Plan >100k		Base Plan (with MW-miles)		Direct Assign TOTAL		Base Plan TOTALS			
State	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	Number	Dollars	
AR	13.5	\$ 53,599,100	1	\$ 550,000	1	\$ 100,000	14	\$ 30,917,000	2	\$ 37,737,225	15.5	\$ 54,249,100	16.0	\$ 68,654,225	
CO	0.3	\$ 11,250,000	2	\$ 41,000,000							2.3	\$ 52,250,000	0.0	\$ -	
KS	16.8	\$ 58,433,000	7	\$ 8,900,000	3.5	\$ 98,000	8	\$ 20,201,000	5	\$ 23,043,000	27.3	\$ 67,431,000	13.0	\$ 43,244,000	
LA	2.0	\$ 1,000,000	1	\$ 200,000							3.0	\$ 1,200,000	0.0	\$ -	
MO	18.2	\$ 17,862,000	5	\$ 7,294,000	2.5	\$ 13,000	7	\$ 12,606,000	2	\$ 5,760,000	25.7	\$ 25,169,000	9.0	\$ 18,366,000	
NM	4.0	\$ 6,865,000	2	\$ 1,550,000					1	\$ 9,200,000	6.0	\$ 8,415,000	1.0	\$ 9,200,000	
OK	24.0	\$ 30,894,000	9	\$ 3,810,000	6	\$ 413,000	2	\$ 2,625,000	2	\$ 10,500,000	39.0	\$ 35,117,000	4.0	\$ 13,125,000	
TX	25.3	\$ 50,406,000	8	\$ 3,300,000	5	\$ 350,000	3	\$ 4,611,000	2	\$ 16,780,000	38.3	\$ 54,056,000	5.0	\$ 21,391,000	
<b>TOTALS</b>	<b>104.0</b>	<b>\$230,309,100</b>	<b>35</b>	<b>\$ 66,604,000</b>	<b>18</b>	<b>\$ 974,000</b>	<b>34</b>	<b>\$ 70,960,000</b>	<b>14</b>	<b>\$ 103,020,225</b>	<b>157.0</b>	<b>\$ 297,887,100</b>	<b>48.0</b>	<b>\$173,980,225</b>	
Notes: 75% of Finney-Lamar 345kV line is assigned to KS, remainder to CO															