~~Revised~~ 2010 Protocol - Appendix C
Allocation Factors
Algebraic De~~finitions~~rivations

~~November 29, 2004~~September 15, 2010

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Allocation Factors

PacifiCorp serves eight jurisdictions. Jurisdictions are represented by the index i = California, Idaho, Oregon, Utah, Washington, Eastern Wyoming, Western Wyoming, & FERC.

The following assumptions are made in the factor derivations~~finitions~~:

It is assumed that the 12CP (j=1 to 12) method is used in defining the System Capacity ("SC").

It is assumed that twelve months (j=1 to 12) method is used in defining the System Energy ("SE").

In defining the System Generation ("SG") f~~F~~actor, the weighting of 75 percent~~%~~ System Capacity, 25 percent~~%~~ System Energy is assumed to continue.

While it is agreed that the peak loads & input energy should be temperature adjusted, no decision has been made upon the methodology to do these adjustments.

System Capacity Factor ("SC")

$$SCi = \frac{\sum_{j=1}^{12} TAP_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} TAP_{ij}}$$

where:

SC_i = **System Capacity Factor** for jurisdiction i.

TAP_{ij} = Temperature Adjusted Peak Load of jurisdiction i in month j at the time of the System Peak.

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System Energy Factor ("SE")

$$SEi = \frac{\sum_{j=1}^{12} TAE_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} TAE_{ij}}$$

where:

SE_i = **System Energy Factor** for jurisdiction i.
$TAEi_j$ = Temperature Adjusted Input Energy of jurisdiction i in month j.

System Generation Factor ("SG")

$$SG_i = .75 * SC_i + .25 * SE_i$$

where:

SG_i = **System Generation Factor** for jurisdiction i.
SC_i = System Capacity for jurisdiction i.
SE_i = System Energy for jurisdiction i.

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Seasonal System Generation Combustion Turbine (SSGCT)

$$SSGCTi = \left(\frac{\sum_{j=1}^{12} WMO_{jct} * TAP_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} WMO_{jct} * TAP_{ij}}\right) * .75 + \left(\frac{\sum_{j=1}^{12} WMO_{jct} * TAE_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} WMO_{jct} * TAE_{ij}}\right) * .25$$

where:

$SSGCTi$ = **Seasonal System Generation Combustion Turbine Factor** for jurisdiction i.

$$WMO_{jCT} = \frac{\sum_{ct=1}^{n} E_{jct}}{\sum_{j=1}^{12}\sum_{ct=1}^{n} E_{jct}}$$ Weighted monthly energy generation of combustion turbine

where:

E_{jct} = Monthly Energy generation of combustion turbine ct in month j.

n = Number of combustion turbines

TAP_{ij} = Temperature-Adjusted Peak Load of jurisdiction i in month j at the time of the System Peak.

TAE_{ij} = Temperature-Adjusted Input Energy of jurisdiction i in month j.

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~~Seasonal System Energy Combustion Turbine (SSECT)~~

$$SSECTi = \frac{\sum_{j=1}^{12} WMO_{jct} * TAE_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} WMO_{jct} * TAE_{ij}}$$

~~where:~~

~~$SSECTi$ = **Seasonal System Energy Combustion Turbine Factor** for jurisdiction i.~~

~~WMO_{jCT} = $\frac{\sum_{ct=1}^{n} E_{jct}}{\sum_{j=1}^{12}\sum_{ct=1}^{n} E_{jct}}$ Weighted monthly energy generation of combustion turbine~~

~~where:~~

~~E_{jct} = Monthly Energy generation of combustion turbine ct in month j.~~

~~n = Number of combustion turbines~~

~~TAE_{ij} = Temperature Adjusted Input Energy of jurisdiction i in month j.~~

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~~Seasonal System Generation Purchases (SSGP)~~

$$SSGPi = \left(\frac{\sum_{j=1}^{12} WMO_{jsp} * TAP_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} WMO_{jsp} * TAP_{ij}} \right) * .75 + \left(\frac{\sum_{j=1}^{12} WMO_{jsp} * TAE_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} WMO_{jsp} * TAE_{ij}} \right) * .25$$

~~where:~~

~~$SSGPi$ = **Seasonal System Generation Purchases Factor** for jurisdiction i.~~

~~WMO_{jsp} =~~ $\frac{\sum_{sp=1}^{n} E_{jsp}}{\sum_{j=1}^{12}\sum_{sp=1}^{n} E_{jsp}}$ ~~Weighted monthly energy from seasonal purchases~~

~~where:~~

~~E_{jsp} = Monthly Energy from seasonal purchases sp in month j.~~

~~n = Number of seasonal purchases~~

~~TAP_{ij} = Temperature-Adjusted Peak Load of jurisdiction i in month j at the time of the System Peak.~~

~~TAE_{ij} = Temperature-Adjusted Input Energy of jurisdiction i in month j.~~

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Seasonal System Generation Cholla (SSGCH)

$$SSGCHi = \left(\frac{\sum_{j=1}^{12} WMO_{jch} * TAP_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} WMO_{jch} * TAP_{ij}} \right) * .75 + \left(\frac{\sum_{j=1}^{12} WMO_{jch} * TAE_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} WMO_{jch} * TAE_{ij}} \right) * .25$$

where:

$SSGCHi$ = **Seasonal System Generation Cholla Factor** for jurisdiction i.

$$WMO_{JCH} = \frac{E_{jch} + E_{jraps} - E_{jdaps}}{\sum_{j=1}^{12} E_{jch} + E_{jraps} - E_{jdaps}}$$ Weighted monthly energy generation of Cholla plus energy received from APS less energy delivered to APS

where:

E_{jch} = Monthly Energy generation of Cholla plant in month j.

E_{jraps} = Monthly Energy received from APS in month j.

E_{jdaps} = Monthly Energy delivered to APS in month j.

TAP_{ij} = Temperature Adjusted Peak Load of jurisdiction i in month j at the time of the System Peak.

TAE_{ij} = Temperature Adjusted Energy Output of jurisdiction i in month j.

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Seasonal System Energy Cholla (SSECH)

$$SSECHi = \frac{\sum_{j=1}^{12} WMO_{jch} * TAE_{ij}}{\sum_{i=1}^{8}\sum_{j=1}^{12} WMO_{jch} * TAE_{ij}}$$

where:

SSECHi = **Seasonal System Energy Cholla Factor** for jurisdiction i.

$$WMO_{JCH} = \frac{E_{jch} + E_{jraps} - E_{jdaps}}{\sum_{j=1}^{12} E_{jch} + E_{jraps} - E_{jdaps}}$$ Weighted monthly energy generation of Cholla plus energy received from APS less energy delivered to APS

where:

E_{jch} = Monthly Energy generation of Cholla plant in month j.

E_{jraps} = Monthly Energy received from APS in month j.

E_{jdaps} = Monthly Energy delivered to APS in month j.

TAE_{ij} = Temperature Adjusted Energy Output of jurisdiction i in month j.

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Mid-C Factor ("MC")

$$MC_i = \frac{WMCE_i}{\sum_{i=1}^{i=8} WMCE_i}$$

where:

MCi = **Mid-C Factor** for jurisdiction i.

$WMCE_i = E^*_{ipr} + (E_{rr} * \text{SGi}) + (E_{wa} * WWA_i) + (E_w * \text{SGi})$ Weighted Mid-C Contracts annual energy generation

where:

$E^*_{ipr} = E_{ipr}$ If i is Oregon, otherwise

$E^*_{ipr} = 0$

E_{ipr} = Annual Energy generation of Priest Rapids.

. E_{rr} = Annual Energy generation of Rocky Reach.

E_{wa} = Annual Energy generation of Wanapum.

E_w = Annual Energy generation of Wells.

$WWA_i = \frac{SG^*_i}{\sum_{i=1}^{i=8} SG^*_i}$ Weighted Wanapum Energy

where:

$SG^*_i = SG_i$ if i is Washington or Oregon jurisdiction, otherwise

$SG^*_i = 0$.

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SG_i = System Generation for jurisdiction i.

Division Generation - Pacific Factor ("DGP")

$$DGP_i = \frac{SG_i^*}{\sum_{i=1}^{i=8} SG_i^*}$$

where:

DGP_i = **Division Generation - Pacific Factor** for jurisdiction i.

SG_i^* = SG_i if i is a Pacific jurisdiction, otherwise

SG_i^* = 0.

SG_i = System Generation for jurisdiction i.

Division Generation - Utah Factor ("DGU")

$$DGU_i = \frac{SG_i^*}{\sum_{i=1}^{i=8} SG_i^*}$$

where:

DGU_i = **Division Generation - Utah Factor** for jurisdiction i.

SG_i^* = SG_i if i is a Utah jurisdiction, otherwise

SG_i^* = 0.

SG_i = System Generation for jurisdiction i.

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System Net Plant Production - Steam Factor ("SNPPS")

$$SNPPS_i = \frac{SG_i * (PPS~~O~~ - ADPPS~~O~~) + ~~SSGCT_i * (PPSCT - ADPPSCT) + SSGCH_i * (PPSCH - ADPPSCH~~)}{(PPS - ADPPS)}$$

where:

$SNPPS_i$	=	**System Net Plant - Steam Factor** for jurisdiction i.
SG_i	=	System Generation for jurisdiction i.
~~$SSGCT_i$~~	~~=~~	~~Seasonal System Generation Combustion Turbine Generation for jurisdiction i.~~
~~$SSGCH_i$~~	~~=~~	~~Seasonal System Generation Cholla for jurisdiction i.~~
~~*PPSO*~~	~~=~~	~~Steam Production Plant less Combustion Turbine and Cholla.~~
~~*ADPPSO*~~	~~=~~	~~Accumulated Depreciation Steam Production Plant less Combustion Turbine and Cholla~~.
~~*PPSCT*~~	~~=~~	~~Steam Production Plant – Combustion Turbine.~~
~~*ADPPSCT*~~	~~=~~	~~Accumulated Depreciation Steam Production Plant – Combustion Turbine.~~
~~*PPSCH*~~	~~=~~	~~Steam Production Plant – Cholla.~~
~~*ADPPSCH*~~	~~=~~	~~Accumulated Depreciation Steam Production Plant – Cholla.~~
PPS	=	Steam Production Plant~~-~~.
ADPPS	=	Accumulated Depreciation Steam Production Plant.

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System Net Plant Production - Hydro Factor ("SNPPH")

$$SNPPH_i = \frac{SG_i * (PPHE - ADPPHE) + SG_i * (PPHRP - ADPPHRP)}{(PPH - ADPPH)}$$

where:

$SNPPH_i$	=	**System Net Plant - Hydro Factor** for jurisdiction i.
SG_i	=	System Generation for jurisdiction i.
$PPHE$	=	Hydro Production Plant – East.
$ADPPHE$	=	Accumulated Depreciation & Amortization Hydro Production Plant - East.
$PPHRP$	=	Hydro Production Plant - Pacific.
$ADPPHRP$	=	Accumulated Depreciation & Amortization Hydro Production Plant - Pacific.
PPH	=	Hydro Production Plant.
$ADPPH$	=	Accumulated Depreciation & Amortization Hydro Production Plant.

System Net Plant - Distribution Factor ("SNPD")

$$SNPD_i = \frac{PD_i - ADPD_i}{(PD - ADPD)}$$

where:

$SNPD_i$	=	**System Net Plant - Distribution Factor** for jurisdiction i.
PD_i	=	Distribution Plant - for jurisdiction i.
$ADPD_i$	=	Accumulated Depreciation Distribution Plant - for jurisdiction i.
PD	=	Distribution Plant.
$ADPD$	=	Accumulated Depreciation Distribution Plant.

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System Gross Plant - System Factor ("GPS")

$$GPS_i = \frac{PP_i + PT_i + PD_i + PG_i + PI_i}{\sum_{i=1}^{i=8}(PP_i + PT_i + PD_i + PG_i + PI_i)}$$

$GP\text{-}S_i$ = **Gross Plant - System Factor** for jurisdiction i.
PP_i = Production Plant for jurisdiction i.
PT_i = Transmission Plant for jurisdiction i.
PD_i = Distribution Plant for jurisdiction i.
PG_i = General Plant for jurisdiction i.
PI_i = Intangible Plant for jurisdiction i.

System Net Plant Factor ("SNP")

$$SNP_i = \frac{PP_i + PT_i + PD_i + PG_i + PI_i - ADPP_i - ADPT_i - ADPD_i - ADPG_i - ADPI_i}{\sum_{i=1}^{i=8}(PP_i + PT_i + PD_i + PG_i + PI_i - ADPPi - ADPT_i - ADPD_i - ADPG_i - ADPI_i)}$$

SNP_i = **System Net Plant Factor** for jurisdiction i.
PP_i = Production Plant for jurisdiction i.
PT_i = Transmission Plant for jurisdiction i.
PD_i = Distribution Plant for jurisdiction i.
PG_i = General Plant for jurisdiction i.
PI_i = Intangible Plant for jurisdiction i.
$ADPP_i$ = Accumulated Depreciation Production Plant for jurisdiction i.
$ADPT_i$ = Accumulated Depreciation Transmission Plant for jurisdiction i.
$ADPD_i$ = Accumulated Depreciation Distribution Plant for jurisdiction i.
$ADPG_i$ = Accumulated Depreciation General Plant for jurisdiction i.
$ADPI_i$ = Accumulated Depreciation Intangible Plant for jurisdiction i.

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System Overhead - Gross Factor ("SO")

$$SOG_i = \frac{PP_i + PT_i + PD_i + PG_i + PI_i - PP_{oi} - PT_{oi} - PD_{oi} - PG_{oi} - PI_{oi}}{\sum_{i=1}^{i=8}(PP_i + PT_i + PD_i + PG_i + PP_i - PP_oi - PI_{oi} - PD_{oi} - PG_{oi} - PI_{oi})}$$

SOG_i = **System Overhead - Gross Factor** for jurisdiction i.
PP_i = Gross Production Plant for jurisdiction i.
PT_i = Gross Transmission Plant for jurisdiction i.
PD_i = Gross Distribution Plant for jurisdiction i.
PG_i = Gross General Plant for jurisdiction i.
PI_i = Gross Intangible Plant for jurisdiction i.
PP_{oi} = Gross Production Plant for jurisdiction i allocated on a SO factor.
PT_{oi} = Gross Transmission Plant for jurisdiction i allocated on a SO factor
PD_{oi} = Gross Distribution Plant for jurisdiction i allocated on a SO factor
PG_{oi} = Gross General Plant for jurisdiction i allocated on a SO factor
PI_{oi} = Gross Intangible Plant for jurisdiction i allocated on a SO factor

Income Before Taxes Factor ("IBT")

$$IBT_i = \frac{TIBT_i}{\sum_{i=1}^{i=8} TIBT_i}$$

IBTi = **Income before Taxes Factor** for jurisdiction i.
TIBTi = Total Income before Taxes for jurisdiction i.

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Bad Debt Expense Factor ("BADDEBT")

$$BADDEBT_i = \frac{ACCT904_i}{\sum_{i=1}^{i=8} ACCT904_i}$$

$BADDEBT_i$ = **Bad Debt Expense Factor** for jurisdiction i.
$ACCT904i$ = Balance in Account 904 for jurisdiction i.

Customer Number Factor ("CN")

$$CN_i = \frac{CUST_i}{\sum_{i=1}^{i=8} CUST_i}$$

where:

CN_i = **Customer Number Factor** for jurisdiction i.
$CUST_i$ = Total Electric Customers for jurisdiction i.

Contributions in Aid of Construction ("CIAC")

$$CIAC_i = \frac{CIACNA_i}{\sum_{i=1}^{i=8} CIACNA_i}$$

where:

$CIAC_i$ = **Contributions in Aid of Construction Factor** for jurisdiction i.
$CIACNA_i$ = Contributions in Aid of Construction – Net additions for jurisdiction i.

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Schedule M - Deductions ("SCHMD")

$$SCHMD_i = \frac{DEPRC_i}{\sum_{i=1}^{i=8} DEPRC_i}$$

where:

$SCHMD_i$ = **Schedule M - Deductions (SCHMD) Factor** for jurisdiction i.
$DEPRC_i$ = Depreciation in Accounts 403.1 - 403.9 for jurisdiction i.

Trojan Plant ("TROJP")

$$TROJP_i = \frac{ACCT18222_i}{\sum_{i=1}^{i=8} ACCT18222_i}$$

where:

$TROJP_i$ = **Trojan Plant (TROJP) Factor** for jurisdiction i.
$ACCT18222_i$ = Allocated Adjusted Balance in Account 182.22 for jurisdiction i.

Trojan Decommissioning ("TROJD")

$$TROJD_i = \frac{ACCT22842_i}{\sum_{i=1}^{i=8} ACCT22842_i}$$

where:

$TROJD_i$ = **Trojan Decommissioning (TROJD) Factor** for jurisdiction i.
$ACCT22842_i$ = Allocated Adjusted Balance in Account 228.42 for jurisdiction i.

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Tax Depreciation ("TAXDEPR")

$$TAXDEPR_i = \frac{TAXDEPRA_i}{\sum_{i=1}^{i=8} TAXDEPRA_i}$$

where:

$TAXDEPR_i$ = **Tax Depreciation (TAXDEPR) Factor** for jurisdiction i.
$TAXDEPRA_i$ = Tax Depreciation allocated to jurisdiction i.

(Tax Depreciation is allocated based on functional pre merger and post merger splits of plant using Divisional and System allocations from above. Each jurisdiction's total allocated portion of Tax depreciation is determined by its total allocated ratio of these functional pre and post merger splits to the total Company Tax Depreciation.)

Deferred Tax Expense ("DITEXP")

$$DITEXP_i = \frac{DITEXPA_i}{\sum_{i=1}^{i=8} DITEXPA_i}$$

where:

$DITEXP_i$ = **Deferred Tax Expense (DITEXP) Factor** for jurisdiction i.
$DITEXPA_i$ = Deferred Tax Expense allocated to jurisdiction i.

(Deferred Tax Expense is allocated by a run of PowerTax based upon the above factors. PowerTax is a computer software package used to track Deferred Tax Expense & Deferred Tax Balances. PowerTax allocates Deferred Tax Expense and Deferred Tax Balances to the states based upon a computer run which uses as inputs the preceding factors. If the preceding factors change, the factors generated by PowerTax change.)

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Deferred Tax Balance ("DITBAL")

$$DITBAL_i = \frac{DITBALA_i}{\sum_{i=1}^{i=8} DITBALA_i}$$

where:

$DITBAL_i$	=	**Deferred Tax Balance (DITBAL) Factor** for jurisdiction i.
$DITBALA_i$	=	Deferred Tax Balance allocated to jurisdiction i.

(Deferred Tax Balance is allocated by a run of PowerTax based upon the above factors. PowerTax is a computer software package used to track Deferred Tax Expense & Deferred Tax Balances. PowerTax allocates Deferred Tax Expense and Deferred Tax Balances to the states based upon a computer run which uses as inputs the preceding factors. If the preceding factors change, the factors generated by PowerTax change.)

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