

2012 BPA Rate Case Customer Workshop

April 12, 2010

Rates Analysis Model (RAM)



Agenda

- Introduction to RAM
- RAM Development
- Proof of Concept
- RAM Walk-through
- Next Steps

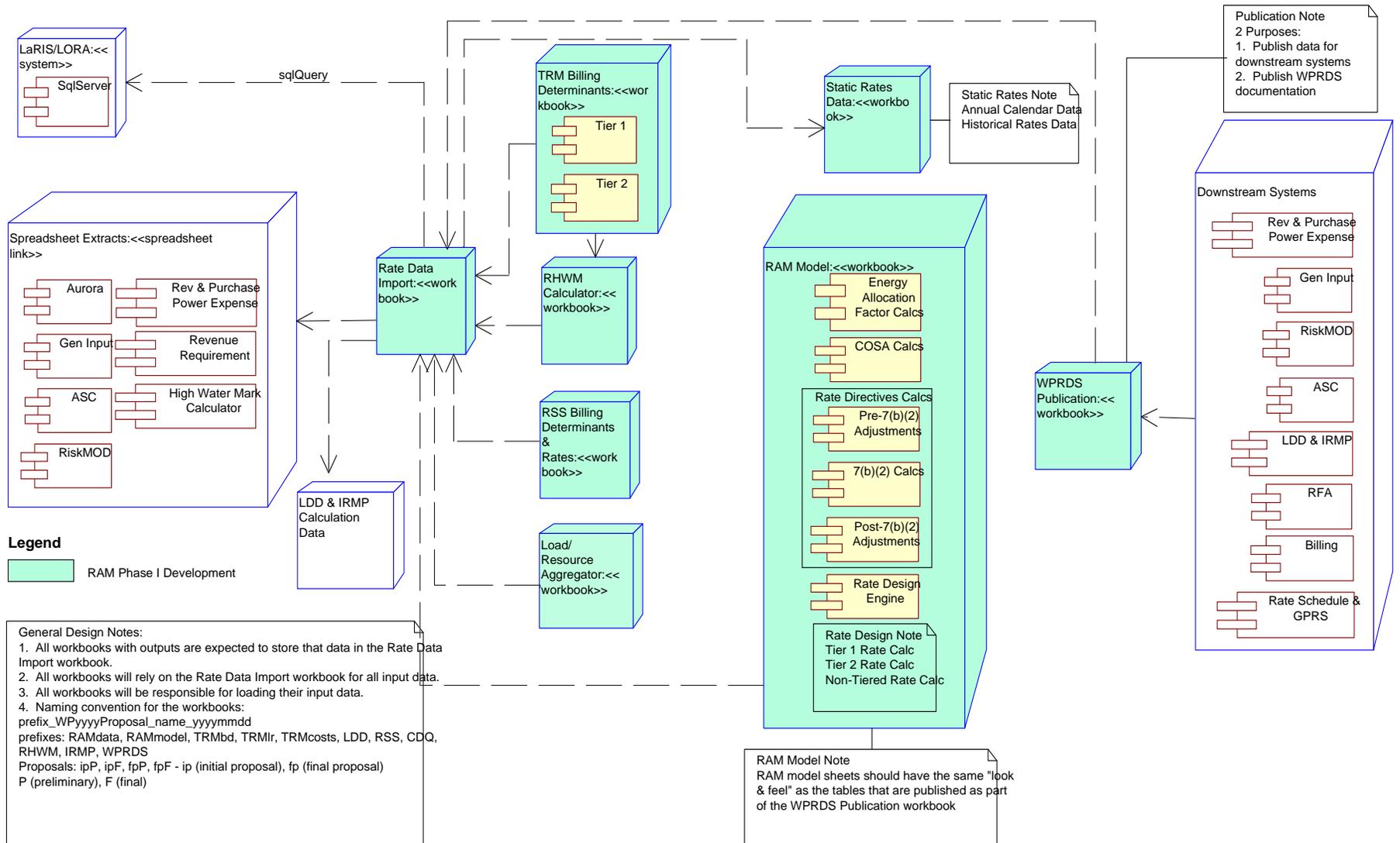


Objectives for RAM Modifications, Phase I

- Modify existing Excel-based RAM to support WP-12 Rate Case including Tiered Rate Methodology.
- Begin implementing spreadsheet standards to improve readability, data flow and user experience.



RAM Phase I – Architecture



Legend

RAM Phase I Development

General Design Notes:

- All workbooks with outputs are expected to store that data in the Rate Data Import workbook.
- All workbooks will rely on the Rate Data Import workbook for all input data.
- All workbooks will be responsible for loading their input data.
- Naming convention for the workbooks:
 prefix_WPyyyProposal_name_yyyymmdd
 prefixes: RAMdata, RAMmodel, TRMbd, TRMlr, TRMcosts, LDD, RSS, CDQ, RHW, IRMP, WPRDS
 Proposals: ipP, ipF, fpP, fpF - ip (initial proposal), fp (final proposal)
 P (preliminary), F (final)

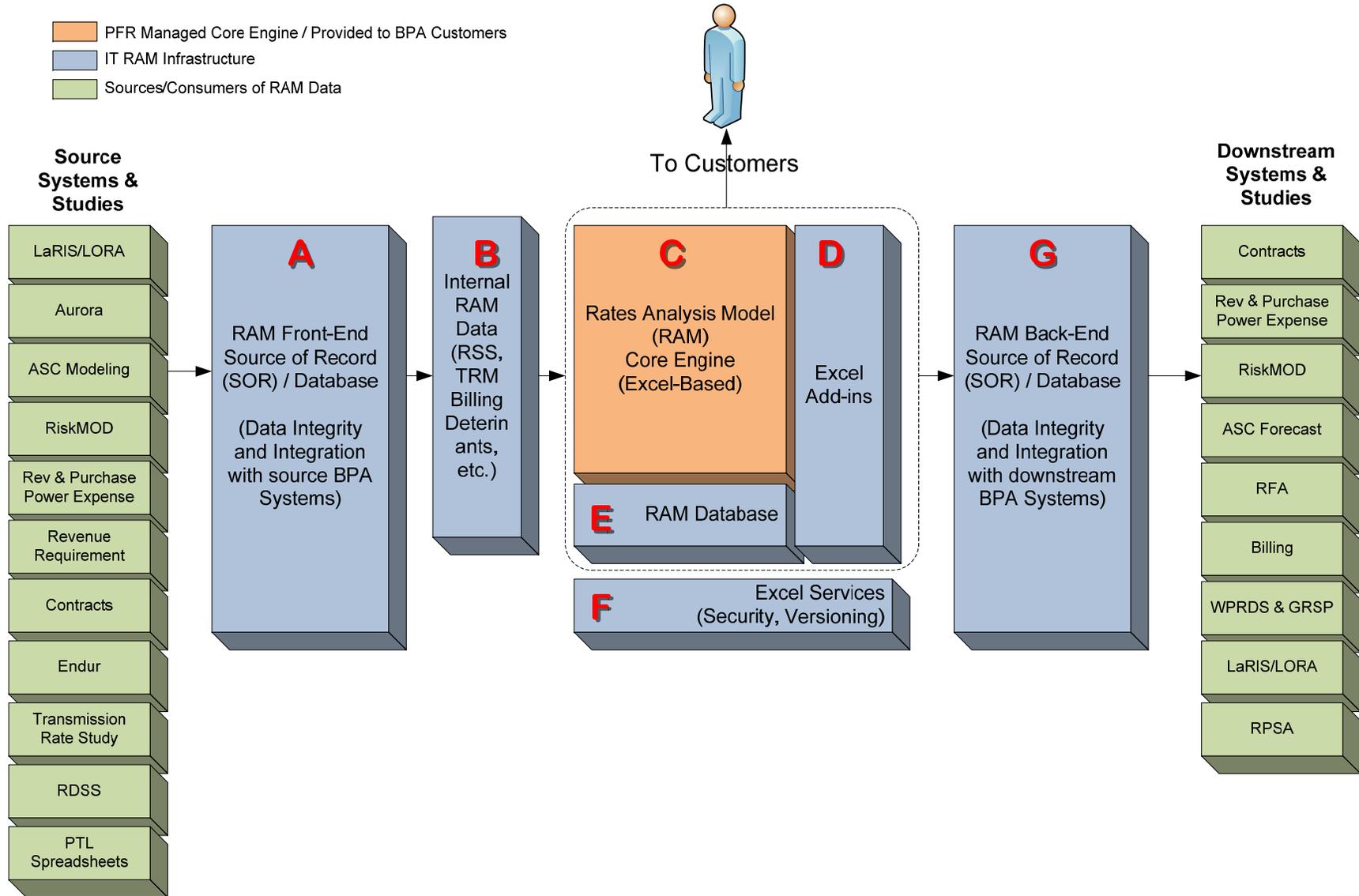


Objectives for RAM Modifications, Phase II

- **Reduce Cost of Developing Rates**
 - Staffing costs
 - Errors introduced by inaccurate or mistyped data
- **Improve Ease of Use**
 - Internal Rate Case Development
 - External Customer Simulations
- **Reduce Reliance on System Experts**
- **Improve Calculation and Data Transparency**
- **Improve Data Integrity**
- **Incorporate Key Controls (A-123)**



RAM Phase II Conceptual Model



PROOF OF CONCEPT



TRM Cost Allocation

This is a demonstration that the TRM cost allocations are not in conflict with the NWPA section 7 rate directives. At the conclusion of the TRM process, customers asked for this assurance and a March release of a rate model that demonstrates how BPA intends to calculate tiered rates.

Page 1 is a summary presentation of the current cost allocations to the various rate classes compiled from the WP-10 Final Proposal (WP-10-FS-BPA-05A).

- The current methodology will continue to be employed under the TRM; this is required to establish the PF Exchange rates (and REP Benefits), the IP rate and the NR Rate.

Page 2 is a summary presentation of cost allocations to the PF Preference rate based upon Page 1 determinations of REP Benefits, the 7(b)(3) allocation to the IP rate, and the total NR allocated cost.

- All costs and credits (using REP benefits instead of exchange resource costs) can be allocated to the PF Preference rate, with appropriate adjustments for FPS and NR revenues, and the calculation of a new 7(c)(2) Delta that includes the 7(b)(3) allocation; altogether, this results in the same amount of costs recovered by the PF Preference rate as using the current cost allocations.
- The total costs and credits, with the specific modifications, can now be subdivided into the various tiered rate cost pools; resulting in the PF Preference rate class paying the same amount of dollars under tiered rates as under the current cost allocation methodology.



TRM Cost Allocation – Page 1

Summary Cost Allocations

Subscription Rate Design WP-10 Values for FY2010-2011	TOTAL ALLOCATED COSTS	TOTAL PF ALLOCATED COSTS	PF PREFERENCE ALLOCATED COSTS	PF EXCHANGE ALLOCATED COSTS	IP ALLOCATED COSTS	NR ALLOCATED COSTS	FPS ALLOCATED COSTS	SECONDARY ALLOCATED COSTS
	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)
POWER RATES								
<u>COST OF SERVICE ANALYSIS</u>								
Federal Base System Resources	4,116,660	4,116,660	2,514,060	1,602,600	0	0.0000	0	0
Exchange Resources + Implementation	4,013,477	3,152,994	1,925,545	1,227,448	325,123	0.0809	535,360	0
New Resources	164,123	0	0	0	62,005	0.0154	102,118	0
Net Conservation	338,041	309,366	188,931	120,435	10,834	0.0027	17,841	0
BPA Programs + Transmission	634,544	580,704	354,638	226,066	20,337	0.0051	33,503	0
TOTAL COSA ALLOCATIONS	9,266,845	8,159,723	4,983,174	3,176,549	418,299	0.1041	688,822	0
<u>RATE DIRECTIVES STEPS</u>								
Secondary Energy Revenue Credit	(1,471,558)	(1,098,015)	(670,562)	(427,453)	0	0.0000	0	(373,543)
Other Revenue Credits	(439,432)	(439,432)	(268,363)	(171,069)	0	0.0000	0	0
Low Density Discount Expense	52,884	52,884	32,297	20,588	0	0.0000	0	0
Irrigation Rate Mitigation Expense	24,072	24,072	14,701	9,371	0	0.0000	0	0
SP Revenue Surplus/Deficit Adjustment	0	429,780	262,468	167,312	2,143	0.0005	(431,923)	0
7(c)(2) Delta Adjustment	0	175,958	107,458	68,500	(175,958)	0.0015	0	0
7(c)(2) Floor Rate Adjustment	0	0	0	0	0	0.0000	0	0
Unbifurcated PF Rate (\$/MWh)		36.32	36.32	36.32				
7(b)(2) Rate Protection	0	(425,531)	(1,003,410)	577,879	51,988	0.0129	0	373,543
7(b)(2) Industrial Adjustment	0	56,101	0	56,101	(56,101)	0.0013	0	0
7(c)(2) Floor Rate Adjustment	0	0	0	0	0	0.0000	0	0
Exchange Transmission Expense	333,515	333,515	0	333,515	0	0.0000	0	0
Total after Rate Directives	7,766,325	7,269,054	3,457,763	3,811,291	240,372	0.1203	256,899	0
Average Rates (\$/MWh)		36.15	28.15	48.68	34.13	68.67	22.77	
<u>RATE DESIGN STEPS</u>								
Slice PF Product Revenues	0	(1,065,783)	(1,065,783)	0	0	0.0000	0	0
Slice Secondary Revenue Credit Adjustment	0	332,981	332,981	0	0	0.0000	0	0
7(c)(2) Slice Separation Adjustment	0	(3,346)	(3,346)	0	3,346	0.0000	0	0
Total Revenue Requirement	7,766,325	6,532,907	2,721,615	3,811,291	243,718	0.1203	256,899	0
Non-Slice Rates (\$/MWh)			28.78		34.60			
Billing Determinant / Energy (GWh)		201,106	122,816	78,290	7,043	0.0018	11,284	
Non-Slice PF Preference Billing Determinant			94,582					



TRM Cost Allocation – Page 2

Summary Cost Allocations

TRM Rate Design	TOTAL	TOTAL PF	PF PREFERENCE	PF EXCHANGE	IP	NR	FPS	SECONDARY
WP-10 Values for FY2010-2011	ALLOCATED	ALLOCATED	ALLOCATED	ALLOCATED	ALLOCATED	ALLOCATED	ALLOCATED	ALLOCATED
	COSTS	COSTS	COSTS	COSTS	COSTS	COSTS	COSTS	COSTS
POWER RATES	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)
<u>COST OF SERVICE ANALYSIS</u>								
Federal Base System Resources	4,116,660	4,116,660	4,116,660	0	0	0.0000	0	0
REP Benefits + Implementation	535,554	535,554	535,554	0	0	0.0000	0	0
New Resources	164,123	164,123	164,123	0	0	0.0000	0	0
Net Conservation	338,041	338,041	338,041	0	0	0.0000	0	0
BPA Programs + Transmission	634,544	634,544	634,544	0	0	0.0000	0	0
TOTAL COSA ALLOCATIONS	5,788,922	5,788,922	5,788,922	0	0	0.0000	0	0
<u>RATE DIRECTIVES STEPS</u>								
Secondary Energy Revenue Credit	(1,471,558)	(1,471,558)	(1,471,558)	0	0	0.0000	0	0
Other Revenue Credits	(439,432)	(439,432)	(439,432)	0	0	0.0000	0	0
Low Density Discount Expense	52,884	52,884	52,884	0	0	0.0000	0	0
Irrigation Rate Mitigation Expense	24,072	24,072	24,072	0	0	0.0000	0	0
FPS Revenue Credit	0	(256,899)	(256,899)	0	0	0.0000	256,899	0
New Resources Rate Revenue Credit	0	(0.1203)	(0.1203)	0	0	0.1203	0	0
7(c)(2) Delta Adjustment	0	(240,372)	(240,372)	0	240,372	0.0000	0	0
PF Preference Rate (\$/MWh)		28.15	28.15					
7(b)(2) Rate Protection	0	0	0	0	0	0.0000	0	0
7(b)(2) Industrial Adjustment	0	0	0	0	0	0.0000	0	0
7(c)(2) Floor Rate Adjustment	0	0	0	0	0	0.0000	0	0
Exchange Transmission Expense	0	0	0	0	0	0.0000	0	0
Total after Rate Directives	3,954,887	3,457,645	3,457,645	0	240,372	0.1203	256,899	0
Average Rates (\$/MWh)		28.15	28.15		34.13	68.67	22.77	
<u>RATE DESIGN STEPS</u>								
Slice PF Product Revenues	0	0	0	0	0	0.0000	0	0
Slice Secondary Revenue Credit Adjustment	0	0	0	0	0	0.0000	0	0
7(c)(2) Slice Separation Adjustment	0	0	0	0	0	0.0000	0	0
Total Revenue Requirement	3,954,887	3,457,645	3,457,645	0	240,372	0.1203	256,899	0
Billing Determinant / Energy (GWh)		122,816	122,816	0	7,043	0.0018	11,284	

