

Appendix C

**2013 Revenue Requirement using Jan-Jun 2013 ABC data**

Revenue Requirement	2013 Budget	Market services	System Operations	CRR services	Indirect	
Direct O&M \$	\$ 70,157	\$ 13,789	\$ 43,900	\$ 827	\$ 11,641	-
Support O&M \$	62,543	-	-	-	62,543	-
Non-ABC support O&M \$	30,207	781	2,513	46	26,867	-
<b>Total O&amp;M</b>	<b>162,907</b>	<b>14,570</b>	<b>46,413</b>	<b>873</b>	<b>101,051</b>	-
O&M Direct %		24%	75%	1%		-
Debt service 2008 bonds	24,666	7,562	12,182	1,196	3,726	-
Debt service 2009 bonds	17,847	-	-	-	17,847	-
Cash funded capital	24,000	-	-	-	24,000	-
<b>Total debt service &amp; capital</b>	<b>66,513</b>	<b>7,562</b>	<b>12,182</b>	<b>1,196</b>	<b>45,573</b>	-
Debt service direct %		36%	58%	6%		-
Other income	(7,900)	(673)	(4,927)	-	(2,300)	-
Operating reserve credit	(25,492)	(1,761)	(2,783)	(284)	(20,664)	-
<b>Total before allocation of indirect</b>	<b>196,028</b>	<b>19,698</b>	<b>50,885</b>	<b>1,785</b>	<b>123,660</b>	-
Direct Costs %		27%	71%	2%		
Allocate indirect costs	-	33,388	87,799	2,473	(123,660)	-
<b>Revenue requirement using actual 2013 time</b>	<b>\$ 196,028</b>	<b>\$ 53,086</b>	<b>\$ 138,684</b>	<b>\$ 4,258</b>		-
<b>Revenue requirement % using 2013 actual time</b>		<b>27%</b>	<b>71%</b>	<b>2%</b>		
<b>Revenue requirement % using tariff</b>		<b>27%</b>	<b>69%</b>	<b>4%</b>		
<b>Difference</b>		<b>0%</b>	<b>2%</b>	<b>-2%</b>		

2013 Revenue Requirement using Jan-Jun 2013 ABC data

2013 ABC Direct Operating Activities										
ABC Level 2 Activities	Code	Market services	System Operations	CRR Services	Indirect	2013 Budget	Market services	System Operations	CRR Services	Indirect
<b>Develop Infrastructure (DI)</b>	<b>80001</b>									
Regulatory contract procedures	201				100%	\$ 428	\$ -	\$ -	\$ -	\$ 428
Manage generation interconnection project (GIP) agreements	202		100%			845	-	845	-	-
Manage GIP	203		100%			2,181	-	2,181	-	-
Long term transmission planning (LTPP)	204		100%			5,021	-	5,021	-	-
New transmission resources	205		100%			677	-	677	-	-
Transmission maintenance studies	206		100%			496	-	496	-	-
Load resource data	207		100%			271	-	271	-	-
Seasonal assessment	208		100%			243	-	243	-	-
Queue management	209		100%			578	-	578	-	-
<b>Total DI</b>		<b>0%</b>	<b>96%</b>	<b>0%</b>	<b>4%</b>	<b>10,740</b>	<b>-</b>	<b>10,312</b>	<b>-</b>	<b>428</b>
<b>Develop Markets (DM)</b>	<b>80002</b>									
Post order rehearing	228				100%	26	-	-	-	26
Develop State/Fed regulatory policy	229				100%	551	-	-	-	551
Business process manual (BPM) change management process	230				100%	35	-	-	-	35
Develop infrastructure policy	231		100%			946	-	946	-	-
Perform market analysis	232	100%				1,961	1,961	-	-	-
Develop market design	233	100%				2,611	2,611	-	-	-
Regulatory contract negotiations	234				100%	135	-	-	-	135
<b>Total DM</b>		<b>73%</b>	<b>15%</b>	<b>0%</b>	<b>12%</b>	<b>6,265</b>	<b>4,572</b>	<b>946</b>	<b>-</b>	<b>747</b>

**2013 Revenue Requirement using Jan-Jun 2013 ABC data**

2013 ABC Direct Operating Activities										
ABC Level 2 Activities	Code	Market services	System Operations	CRR Services	Indirect	2013 Budget	Market services	System Operations	CRR Services	Indirect
<b>Manage Market &amp; Reliability Data &amp; Modeling (MMR)</b>	<b>80004</b>									
Manage full network model (FNM) maintenance	301	50%	50%			1,675	837	838	-	-
Plan & develop operations simulator training	302	20%	80%			269	54	215	-	-
ISO meter certification	303		100%			347	-	347	-	-
Energy measurement acquisition & analysis (EMAA) telemetry	304		100%			78	-	78	-	-
Metering system configuration for market resources	305		100%			105	-	105	-	-
Manage congestion revenue rights (CRRs)	307			100%		536	-	-	536	-
Manage credit and collateral	308	45%	45%	10%		587	264	264	59	-
Resource management	309	50%	50%			816	408	408	-	-
Manage reliability requirements	310		100%			1,037	-	1,037	-	-
Manage operations planning	311		100%			1,381	-	1,381	-	-
Manage WECC seasonal studies	312		100%			120	-	120	-	-
Participating intermittent resource projects (PIRP)	313	20%	80%			1	-	1	-	-
Manage & facilitate procedure maintenance	314	20%	80%			681	136	545	-	-
Procedure administration & reporting	315	50%	50%			2	1	1	-	-
Plan & develop operations training	316	20%	80%			828	166	662	-	-
Execute & track operations training	317	20%	80%			1,100	220	880	-	-
California Energy Training Advisory Committee (CETAC) activity	318		100%			111	-	111	-	-
Provide stakeholder training	320		100%			321	-	321	-	-
Scheduling Coordinator (SC) management	321				100%	156	-	-	-	156
<b>Total MMR</b>		<b>21%</b>	<b>72%</b>	<b>6%</b>	<b>2%</b>	<b>10,151</b>	<b>2,086</b>	<b>7,314</b>	<b>595</b>	<b>156</b>

**2013 Revenue Requirement using Jan-Jun 2013 ABC data**

2013 ABC Direct Operating Activities										
ABC Level 2 Activities	Code	Market services	System Operations	CRR Services	Indirect	2013 Budget	Market services	System Operations	CRR Services	Indirect
<b>Manage Market &amp; Grid (MMG)</b>	<b>80005</b>									
Manage day ahead (DA) market support	352	50%	50%			94	47	47	-	-
Manage real time market (RTM) support	353	50%	50%			1,462	731	731	-	-
Outage & model management	355		100%			2,882	-	2,882	-	-
Manage DA market	358	50%	50%			2,886	1,443	1,443	-	-
Manage pre & post scheduling	359		100%			1,254	-	1,254	-	-
Manage operations engineering support	362	20%	80%			1,171	234	937	-	-
RTM - shift supervisor - Post DA & Pre RT & Manage Emergency Operations	363	50%	50%			1,984	992	992	-	-
Real time operations (RTO) - generation & real time renewables coordinator (RRC) desks - Maintain balancing area & manage real time pre-dispatch (RTPD)	364	20%	80%			5,926	1,185	4,741	-	-
RTO - transmission desk: transmission & electric system	365		100%			4,913	-	4,913	-	-
RTO - scheduling desk - manage RT interchange scheduling	366		100%			3,690	-	3,690	-	-
<b>Total MMG</b>		<b>18%</b>	<b>82%</b>	<b>0%</b>	<b>0%</b>	<b>26,262</b>	<b>4,632</b>	<b>21,630</b>	<b>-</b>	<b>-</b>
<b>Manage Operations Support &amp; Settlements (MOS)</b>	<b>80007</b>									
Manage price validation & corrections	401	50%	50%			237	118	119	-	-
Manage dispute analysis & resolution	402				100%	711	-	-	-	711
Manage market quality system (MQS)	403	50%	50%			1,203	601	602	-	-
Manage data requests	404				100%	146	-	-	-	146
Manage regulation no-pay & deviation penalty calculations	405		100%			8	-	8	-	-
Manage rules of conduct	406				100%	137	-	-	-	137
ISO remote intelligence gateway (RIG) engineering	408		100%			302	-	302	-	-
Manage EMAA	409		100%			870	-	870	-	-
Manage market clearing	411	45%	45%	10%		92	41	41	10	-
Manage market billing & settlements	412	45%	45%	10%		1,186	534	534	118	-
Manage reliability must run (RMR) settlements	413		100%			6	-	6	-	-
Manage settlements release cycle	414	45%	45%	10%		1,040	468	468	104	-
Manage market performance	417	50%	50%			282	141	141	-	-
Manage dispute analysis & resolution	418				100%	29	-	-	-	29
Perform market validation	419	50%	50%		100%	1,193	596	597	-	-
<b>Total MOS</b>		<b>34%</b>	<b>50%</b>	<b>3%</b>	<b>14%</b>	<b>7,442</b>	<b>2,499</b>	<b>3,688</b>	<b>232</b>	<b>1,023</b>

2013 Revenue Requirement using Jan-Jun 2013 ABC data

2013 ABC Direct Operating Activities										
ABC Level 2 Activities	Code	Market services	System Operations	CRR Services	Indirect	2013 Budget	Market services	System Operations	CRR Services	Indirect
<b>Support Customers &amp; Stakeholders (SCS)</b>	<b>80010</b>									
Represent ISO	539				100%	308	-	-	-	308
Client Inquiries	601				100%	1,345	-	-	-	1,345
Account management	602				100%	894	-	-	-	894
Stakeholder Processes	603				100%	792	-	-	-	792
Develop participating transmission owners (PTOs)	605		100%			10	-	10	-	-
Serve New Customers	606				100%	274	-	-	-	274
Government Affairs	609				100%	3,858	-	-	-	3,858
Communication & Public Relations	610				100%	1,816	-	-	-	1,816
<b>Total SCS</b>		<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>100%</b>	<b>9,297</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>9,287</b>
<b>Total Direct O&amp;M</b>		<b>20%</b>	<b>62%</b>	<b>1%</b>	<b>17%</b>	<b>\$ 70,157</b>	<b>\$ 13,789</b>	<b>\$ 43,900</b>	<b>\$ 827</b>	<b>\$ 11,641</b>
<b>Direct O&amp;M % with indirect</b>						<b>100%</b>	<b>20%</b>	<b>62%</b>	<b>1%</b>	<b>17%</b>
<b>Direct O&amp;M % without indirect</b>							<b>24%</b>	<b>75%</b>	<b>1%</b>	

2013 Revenue Requirement using Jan-Jun 2013 ABC data

2013 ABC Support, non-ABC Support costs, other revenue & operating reserve credit

ABC Level 1 Activities or Division	Market services	System Operations	CRR Services	Indirect	2013 Budget	Market services	System Operations	CRR Services	Indirect	Comments
<b>ABC Support costs</b>										
Manage Human Capabilities (MHC) (80003)				100%	\$ 5,987	\$ -	\$ -		\$ 5,987	
Plan & Manage Business (PMB) (80008)				100%	9,564	-	-		9,564	
Support Business Services (SBS) (80009)				100%	46,992	-	-	-	46,992	
<b>Total Support Activities</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>100%</b>	<b>\$ 62,543</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 62,543</b>	
<b>Non-ABC Support costs</b>										
<b>Technology division</b>										
Hardware & software maintenance & leases				100%	\$ 9,145	\$ -	\$ -	\$ -	\$ 9,145	
Communications (AT&T)				100%	5,952	-	-	-	5,952	
Occupancy				100%	4,673	-	-	-	4,673	
<b>Operations division</b>										
Intermittent resource forecasting fee	20%	80%	0%	0%	2,670	534	2,136	-	-	use 80004 #313
<b>General Counsel &amp; Administrative Services division</b>										
Legal, audit & bank fees				100%	5,180	-	-	-	5,180	
Professional fees - SSAE 16 audit	45%	45%	10%	0%	470	212	212	46	-	use 80007 #412
Professional fees - Operational assessment	18%	82%	0%	0%	200	35	165	-	-	use 80005 total
Insurance				100%	1,917	-	-	-	1,917	
<b>Total non-ABC support costs</b>	<b>3%</b>	<b>8%</b>	<b>0%</b>	<b>89%</b>	<b>\$ 30,207</b>	<b>\$ 781</b>	<b>\$ 2,513</b>	<b>\$ 46</b>	<b>\$ 26,867</b>	
<b>Other revenue</b>										
SC application fee				100%	\$ 100	\$ -	\$ -	\$ -	\$ 100	
Metered sub-system (MSS) penalties				100%	250	-	-	-	250	
SC training fees				100%	150	-	-	-	150	
Intermittent resource forecasting fee	20%	80%	0%	0%	1,600	320	1,280	-	-	use 80004 #313
Large generator interconnection poroject (LGIP) study fees	0%	100%	0%	0%	2,000	-	2,000	-	-	use 80001 #203
Interest				100%	1,800	-	-	-	1,800	
Ccalifornia Oregon intertie (COI) path operator fees	18%	82%	0%	0%	2,000	353	1,647	-	-	use 80005 total
<b>Total other revenue</b>	<b>9%</b>	<b>62%</b>	<b>0%</b>	<b>29%</b>	<b>\$ 7,900</b>	<b>\$ 673</b>	<b>\$ 4,927</b>	<b>\$ -</b>	<b>\$ 2,300</b>	

**2013 Revenue Requirement using Jan-Jun 2013 ABC data**

<b>2013 ABC Support, non-ABC Support costs, other revenue &amp; operating reserve credit</b>										
ABC Level 1 Activities or Division	Market services	System Operations	CRR Services	Indirect	2013 Budget	Market services	System Operations	CRR Services	Indirect	Comments
<b>Operating reserve credit</b>										
Decrease in 15% operating reserve for O&M				100%	\$ 21	\$ -	\$ -	\$ -	\$ 21	
25% debt service reserve 2008 bonds	31%	49%	5%	15%	5,680	1,761	2,783	284	852	use debt service allocation
25% debt service reserve 2009 bonds	0%	0%	0%	100%	3,570	-	-	-	3,570	use debt service allocation
Revenue changes				100%	9,266	-	-	-	9,266	
Expense changes				100%	6,955	-	-	-	6,955	
<b>Total operating reserve credit</b>	<b>7%</b>	<b>11%</b>	<b>1%</b>	<b>81%</b>	<b>\$ 25,492</b>	<b>\$ 1,761</b>	<b>\$ 2,783</b>	<b>\$ 284</b>	<b>\$ 20,664</b>	

**2013 Revenue Requirement using Jan-Jun 2013 ABC data**

**2013 Debt Service 2008 & 2009 Bonds and Cash Funded Capital**

System / Type	Market Services	System Operations	CRR Svcs	Indirect	2013 Budget	Market services	System Operations	CRR Svcs	Indirect	Comments
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**Debt Service 2008 Bonds**

<b>Operations Related Software</b>										
System / Type	Market Services	System Operations	CRR Svcs	Indirect	2013 Budget	Market services	System Operations	CRR Svcs	Indirect	Comments
Automated Dispatch System (ADS)		100%			\$ 30	\$ -	\$ 30	\$ -	\$ -	
Automated Load Forecast System (ALFS)	50%	50%			79	40	39	-	-	
Automatic Mitigation Procedure (AMP)		100%			125	-	125	-	-	
CRRs			100%		855	-	-	855	-	
Energy Management System (EMS)		100%			1,249	-	1,249	-	-	
Exist Transmiss Contracts Calculator (ETCC)	50%	50%			5	2	3	-	-	
Full Network Model / State estimator	50%	50%			182	91	91	-	-	
Integrated Forward Market (IFM) / RTM	50%	50%			6,240	3,120	3,120	-	-	
MQS	50%	50%			1,013	506	507	-	-	
Master file	50%	50%			409	205	204	-	-	
Meter Data Acquisition System (MDAS)		100%			15	-	15	-	-	
Network Applications	50%	50%			674	337	337	-	-	
New Resource Interconnection system (NRI) & resource interconnection management system (RIMS)	20%	80%			219	44	175	-	-	
Open Access Same Time Information System (OASIS)	50%	50%			66	33	33	-	-	
Operational Meter Analysis & Reporting (OMAR)		100%			96	-	96	-	-	
PIRP	20%	80%			45	9	36	-	-	
Portal	50%	50%			473	236	237	-	-	
CAISO Market Results interface (CMRI)	50%	50%			411	206	205	-	-	
Process Information System (PI)		100%			137	-	137	-	-	
RTM split off 50% into Hour Ahead Scheduling Process (HASP)	20%	80%			1,271	254	1,017	-	-	
HASP split off 50% from RTM	50%	50%			1,270	635	635	-	-	
Resource Adequacy	50%	50%			43	21	22	-	-	
RMR application Validation Engine (RAVE)	50%	50%			5	3	2	-	-	
Scheduling & Logging for ISO CA (SLIC)	50%	50%			295	147	148	-	-	
Control Area Scheduler (CAS)	50%	50%			47	23	24	-	-	
Sched Infrastructure Business Rules (SIBR)	50%	50%			1,801	900	901	-	-	
Settlements & Market Clearing (SaMC)	15%	75%	10%		3,407	511	2,555	341	-	based on DA & RT charge codes
<b>Total Operations related software</b>	<b>36%</b>	<b>58%</b>	<b>6%</b>	<b>0%</b>	<b>20,462</b>	<b>7,323</b>	<b>11,943</b>	<b>1,196</b>		

**2013 Revenue Requirement using Jan-Jun 2013 ABC data**

**2013 Debt Service 2008 & 2009 Bonds and Cash Funded Capital**

System / Type	Market Services	System Operations	CRR Svcs	Indirect	2013 Budget	Market services	System Operations	CRR Svcs	Indirect	Comments
<b>General Software &amp; Fixed Assets</b>										
Client relations & engineering analysis tools				100%	154	-	-	-	154	
Department of Market Monitoring (DMM) & compliance Tools (SAS MARS)	50%	50%	0%	0%	478	239	239	-	-	
Local & wide area (LAN & WAN) & monitoring (Tivoli)				100%	650	-	-	-	650	
Office automation desktop laptop (OA)				100%	80	-	-	-	80	
Oracle Corporate Financials				100%	606	-	-	-	606	
Security External Physical & Information Security Services (CUDA)				100%	99	-	-	-	99	
Storage (EMC symmetrix)				100%	889	-	-	-	889	
Land & feasibility studies				100%	238	-	-	-	238	
NT servers & WEB servers				100%	232	-	-	-	232	
New system equipment				100%	400	-	-	-	400	
Office equipment, furniture & leasehold improvements				100%	378	-	-	-	378	
<b>Total fixed assets</b>	<b>6%</b>	<b>6%</b>	<b>0%</b>	<b>89%</b>	<b>4,204</b>	<b>239</b>	<b>239</b>	<b>-</b>	<b>3,726</b>	
<b>Total debt service 2008 Bonds</b>	<b>31%</b>	<b>49%</b>	<b>5%</b>	<b>15%</b>	<b>\$ 24,666</b>	<b>\$ 7,562</b>	<b>\$ 12,182</b>	<b>\$ 1,196</b>	<b>\$ 3,726</b>	
<b>Debt Service 2009 Bonds</b>										
Building, land & feasibility studies				100%	\$ 17,847	\$ -	\$ -	\$ -	\$ 17,847	
<b>Total debt service 2009 Bonds</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>100%</b>	<b>\$ 17,847</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 17,847</b>	
<b>Cash Funded Capital</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>100%</b>	<b>\$ 24,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 24,000</b>	