

Budget 2012-13 Assumptions

RESOURCE AVAILABILITY

1.5 Renewable Resources

1) Resources are derived from the Renewables Master List provided by the Power System's Planning Group.

Type	Resource No	Project Name	Ownership	Project Manager	Transmission Path	Wheeling & Integration Fee (\$/MWh)	Commerical Operation Date	Term Years	Capacity MW	P50 Energy GWh	P90 Energy GWh	Status
BioMass	1	Digester	Own	DWP	DWP	No	1/1/2006	25	16	131	118	Online
	2	Lopez_Canyon	Bilateral	DWP	DWP	No	4/1/2006	30	1.5	1	1	Online
	3	Toyon Landfill	Bilateral	DWP	DWP	No	7/1/2009	4.5	3.6	7	7	Online
	4	WM_Bradley	Bilateral	DWP	DWP	No	1/1/2006	10	6.4	44	40	Online
Geothermal	5	Generic_Geo	Bilateral	DWP	McC-Victorville	20	1/1/2022	30	50	400	360	In Development
	6	Geo_1	Bilateral	DWP	McC-Victorville	0	5/1/2017	30	25	200	180	In Development
	7	Geo_2	Bilateral	DWP	McC-Victorville	0	5/1/2018	30	25	200	180	In Development
	8	Geo_3	Bilateral	DWP	McC-Victorville	0	5/1/2019	30	25	200	180	In Development
	9	Geo_4	Bilateral	DWP	McC-Victorville	0	1/1/2020	30	25	200	180	In Development
	10	Geo_PPA_2016O	Bilateral	DWP	McC-Victorville	9.8	9/1/2016	30	15	125	113	In Development
Hydro	11	Geo_PPA_2017T	Bilateral	DWP	Inyo-Rinaldi	15	7/1/2017	30	53	441	397	In Development
	12	AQ, OV, OG	Own	DWP	Inyo-Rinaldi	No	1/1/1997	50	166	569	512	Online
	13	Aqueduct_Improvement	Own	DWP	Inyo-Rinaldi	No	7/1/2016	30	4	30	27	In Development
	14	Castaic Efficiency	Own	DWP	DWP	No	7/1/2009	30	45	23	21	Online
	15	MWD Hydro	Bilateral	SCPPA	DWP	No	11/1/2008	30	9	33	30	Online
	16	N_Hollywood	Own	DWP	DWP	No	1/1/2010	30	1	5	5	Online
	17	WS_Hydro	Own	Own	DWP	No	7/1/2016	30	4	22	20	In Development
Solar Central	18	Solar_Adelanto_1	Bilateral	DWP	McC-Victorville	No	6/30/2012	30	10	20	18	In Development
	19	Solar_Owens	Bilateral	DWP	DWP	No	1/1/2017	30	50	110	99	In Development
	20	Solar_Pinetree	Own	DWP	Inyo-Rinaldi	No	10/1/2012	30	9	17	15	In Development
	21	Solar_PPA_2014K	Bilateral	DWP	McC-Victorville	9.8	2/1/2014	30	200	565	509	In Development
	22	Solar_PPA_2015B	Bilateral	DWP	Inyo-Rinaldi	7.9	1/1/2016	30	150	340	306	In Development
	23	Solar_PPA_2015CM	Bilateral	DWP	McC-Victorville	8.9	1/1/2014	30	150	330	297	In Development
	24	Solar_PPA_2015FM	Own	DWP	McC-Victorville	12	4/30/2016	30	155	444	400	In Development
Solar Rooftop	25	Solar_PPA_2015R	Bilateral	DWP	DWP	7.9	12/31/2015	30	53	146	131	In Development
	26	Rooftop - Feed-in	Bilateral	DWP	DWP	No	Various	30	150	0	0	In Development
	27	Rooftop - SB1	-	DWP	DWP	No	Various	30	190	314	283	In Development
Wind	28	Rooftop - UOS	Own	DWP	DWP	No	Various	30	100	180	162	In Development
	29	Linden Wind	Bilateral	SCPPA	NOB	39.55	6/30/2010	30	50	145	131	Online
	30	Pine Canyon_Wind	Own	DWP	Inyo-Rinaldi	20	1/1/2018	30	100	325	293	In Development
	31	Pine Tree_Wind	Own	DWP	Inyo-Rinaldi	No	6/14/2009	30	135	381	343	Online
	32	PPM_Pebble Springs	Bilateral	SCPPA	NOB	35.31	1/30/2009	18	68.7	193	174	Online
	33	PPM_Wyoming	Bilateral	SCPPA	STS	No	7/1/2006	16.5	82	188	169	Online
	34	Willow Creek Wind	Bilateral	DWP	NOB	31.1	12/31/2008	15	72	197	177	Online
	35	Wind_Milford_1	Bilateral	SCPPA	STS	0	11/16/2009	30	185	434	391	Online
	36	Wind_Milford_2	Bilateral	SCPPA	STS	0	5/2/2011	30	102	217	196	Online
	37	Wind_PPA_2012M	Bilateral	DWP	NOB	33.2	10/1/2012	5.3	39	102	92	In Negotiation
	38	Windy Point	Bilateral	DWP	NOB	37.3	1/15/2010	30	262	694	625	Online

Note: P50 energy is used in the computation of the fuel expense budget, renewables percentage calculation, and the natural gas consumption volume for hedging purpose calculation.

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2) Estimated Renewables Energy Production at 50% Confidence (In GWh)

Type	Project Name	Transmission Path	Commerical Operation Date	Fiscal Year				
				2013	2014	2015	2016	2017
Biogas	Purchased Landfill Gas	DWP	8/1/09	610	610	18	0	0
	Add. Purch. Landfill Gas	DWP	1/1/12	521	521	521	523	521
	Digester	DWP	1/1/06	131	131	131	131	131
	Lopez_Canyon	DWP	4/1/06	1	1	1	1	1
	Toyon Landfill	DWP	7/1/09	7	4	0	0	0
	WM_Bradley	DWP	1/1/06	44	44	44	22	0
			TOTAL	1,314	1,311	715	677	653
Geo	Geo_1	McC-Victorville	5/1/17	0	0	0	0	25
	Geo_PPA_2016O	McC-Victorville	9/1/16	0	0	0	0	104
			TOTAL	0	0	0	0	129
Hydro	AQ, OV, OG	Inyo-Rinaldi	1/1/97	383	569	569	569	569
	Aqueduct_Improvement	Inyo-Rinaldi	7/1/16	0	0	0	0	30
	Castaic Efficiency	DWP	7/1/09	23	23	23	23	23
	MWD Hydro	DWP	11/1/08	33	33	33	33	33
	N_Hollywood	DWP	1/1/10	5	5	5	5	5
	WS_Hydro	DWP	7/1/16	0	0	0	0	22
			TOTAL	444	630	630	630	682
Solar Central	Solar_Adelanto_1	McC-Victorville	6/30/12	20	20	20	20	20
	Solar_Owens	DWP	1/1/17	0	0	0	0	55
	Solar_Pinetree	Inyo-Rinaldi	10/1/12	13	17	17	17	17
	Solar_PPA_2014K	McC-Victorville	2/1/14	0	246	565	565	565
	Solar_PPA_2015B	Inyo-Rinaldi	1/1/16	0	0	50	300	340
	Solar_PPA_2015CM	McC-Victorville	1/1/14	0	98	231	297	330
	Solar_PPA_2015FM	McC-Victorville	4/30/16	0	0	0	75	444
	Solar_PPA_2015R	DWP	12/31/15	0	0	0	73	146
			TOTAL	33	381	883	1,347	1,917
Solar Rooftop	Rooftop - Feed-in	DWP	Various	4	20	56	106	142
	Rooftop - SB1	DWP	Various	137	164	185	205	223
	Rooftop - UOS	DWP	Various	8	12	15	19	41
			TOTAL	149	197	256	330	406
Wind	Linden Wind	NOB	6/30/10	138	131	131	131	131
	Pine Tree_Wind	Inyo-Rinaldi	6/14/09	324	381	381	381	381
	PPM_Pebble Springs	NOB	1/30/09	168	168	193	193	193
	PPM_Wyoming	STS	7/1/06	201	182	171	171	171
	Willow Creek Wind	NOB	12/31/08	185	185	197	197	197
	Wind_Milford_1	STS	11/16/09	405	422	434	434	434
	Wind_Milford_2	STS	5/2/11	208	210	210	206	206
	Wind_PPA_2012M	NOB	10/1/12	76	102	102	102	102
	Windy Point	NOB	1/15/10	670	641	641	641	641
			TOTAL	2,375	2,422	2,460	2,456	2,456

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3) Renewable Resources Sorted by Transmission Path (In MW)

Transmission Path	Project Name	Type	Commerical Operation Date	Fiscal Year				
				2013	2014	2015	2016	2017
DWP	Castaic Efficiency	Hydro	7/1/09	45	45	45	45	45
	Digester	Biomass	1/1/06	16	16	16	16	16
	Lopez_Canyon	BioMass	4/1/06	2	2	2	2	2
	MWD Hydro	Hydro	11/1/08	9	9	9	9	9
	N_Hollywood	Hydro	1/1/10	1	1	1	1	1
	Rooftop - Feed-in	Solar Rooftop - PV	Various	4	13	31	60	79
	Rooftop - SB1	Solar Rooftop - PV	Various	19	32	44	56	65
	Rooftop - UOS	Solar Rooftop - UOS	Various	8	18	31	45	73
	Solar_Owens	Solar Central	1/1/17	0	0	0	0	50
	Solar_PPA_2015R	Solar Central	12/31/15	0	0	0	53	53
	Toyon Landfill	Biomass	7/1/09	4	4	0	0	0
	WM_Bradley	BioMass	1/1/06	6	6	6	6	0
	WS_Hydro	Hydro	7/1/16	0	0	0	0	4
		TOTAL		113	146	185	294	396
Inyo-Rinaldi	AQ, OV, OG	Hydro	1/1/97	166	166	166	166	166
	Aqueduct_Improvement	Hydro	7/1/16	0	0	0	0	4
	Pine Tree_Wind	Wind	6/14/09	135	135	135	135	135
	Solar_Pinetree	Solar Central	10/1/12	9	9	9	9	9
	Solar_PPA_2015B	Solar Central	1/1/16	0	0	150	150	150
		TOTAL		310	310	460	460	464
McC-Victorville	Geo_1	Geothermal	5/1/17	0	0	0	0	25
	Geo_PPA_2016O	Geothermal	9/1/16	0	0	0	0	15
	Solar_Adelanto_1	Solar Central	6/30/12	10	10	10	10	10
	Solar_PPA_2014K	Solar Central	2/1/14	0	200	200	200	200
	Solar_PPA_2015CM	Solar Central	1/1/14	0	150	150	150	150
	Solar_PPA_2015FM	Solar Central	4/30/16	0	0	0	155	155
		TOTAL		10	360	360	515	555
NOB	Linden Wind	Wind	6/30/10	50	50	50	50	50
	PPM_Pebble Springs	Wind	1/30/09	69	69	69	69	69
	Willow Creek Wind	Wind	12/31/08	72	72	72	72	72
	Wind_PPA_2012M	Wind	10/1/12	39	39	39	39	39
	Windy Point	Wind	1/15/10	262	262	262	262	262
		TOTAL		492	492	492	492	492
STS	PPM_Wyoming	Wind	7/1/06	82	82	82	82	82
	Wind_Milford_1	Wind	11/16/09	185	185	185	185	185
	Wind_Milford_2	Wind	5/2/11	102	102	102	102	102
		TOTAL		369	369	369	369	369

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4) Renewable Resources Sorted by Resource Type (In MW)

Type	Project Name	Transmission Path	Commerical Operation Date	Fiscal Year				
				2013	2014	2015	2016	2017
Biomass	Digester	DWP	1/1/06	16	16	16	16	16
	Lopez_Canyon	DWP	4/1/06	2	2	2	2	2
	Toyon Landfill	DWP	7/1/09	4	4	0	0	0
	WM_Bradley	DWP	1/1/06	6	6	6	6	0
			TOTAL	28	28	24	24	18
Geothermal	Geo_1	McC-Victorville	5/1/17	0	0	0	0	25
	Geo_PPA_2016O	McC-Victorville	9/1/16	0	0	0	0	15
			TOTAL	0	0	0	0	40
Hydro	AQ, OV, OG	Inyo-Rinaldi	1/1/97	166	166	166	166	166
	Aqueduct_Improvement	Inyo-Rinaldi	7/1/16	0	0	0	0	4
	Castaic Efficiency	DWP	7/1/09	45	45	45	45	45
	MWD Hydro	DWP	11/1/08	9	9	9	9	9
	N_Hollywood	DWP	1/1/10	1	1	1	1	1
	WS_Hydro	DWP	7/1/16	0	0	0	0	4
			TOTAL	221	221	221	221	229
Solar Central	Solar_Adelanto_1	McC-Victorville	6/30/12	10	10	10	10	10
	Solar_Owens	DWP	1/1/17	0	0	0	0	50
	Solar_Pinetree	Inyo-Rinaldi	10/1/12	9	9	9	9	9
	Solar_PPA_2014K	McC-Victorville	2/1/14	0	200	200	200	200
	Solar_PPA_2015B	Inyo-Rinaldi	1/1/16	0	0	150	150	150
	Solar_PPA_2015CM	McC-Victorville	1/1/14	0	150	150	150	150
	Solar_PPA_2015FM	McC-Victorville	4/30/16	0	0	0	155	155
	Solar_PPA_2015R	DWP	12/31/15	0	0	0	53	53
			TOTAL	19	369	519	727	777
Solar Rooftop	Rooftop - Feed-in	DWP	Various	4	13	31	60	79
	Rooftop - SB1	DWP	Various	19	32	44	56	65
	Rooftop - UOS	DWP	Various	8	18	31	45	73
			TOTAL	31	63	106	162	217
Wind	Linden Wind	NOB	6/30/10	50	50	50	50	50
	Pine Tree_Wind	Inyo-Rinaldi	6/14/09	135	135	135	135	135
	PPM_Pebble Springs	NOB	1/30/09	69	69	69	69	69
	PPM_Wyoming	STS	7/1/06	82	82	82	82	82
	Willow Creek Wind	NOB	12/31/08	72	72	72	72	72
	Wind_Milford_1	STS	11/16/09	185	185	185	185	185
	Wind_Milford_2	STS	5/2/11	102	102	102	102	102
	Wind_PPA_2012M	NOB	10/1/12	39	39	39	39	39
	Windy Point	NOB	1/15/10	262	262	262	262	262
			TOTAL	996	996	996	996	996

