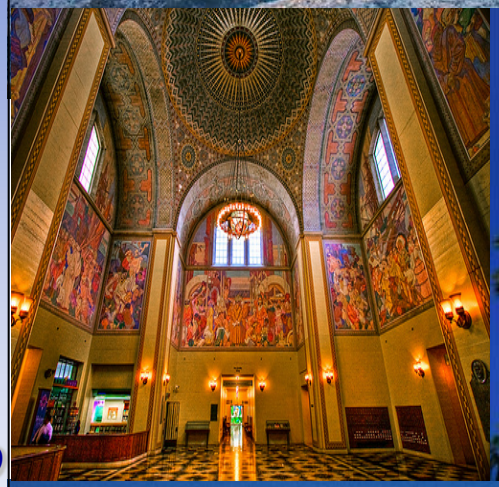
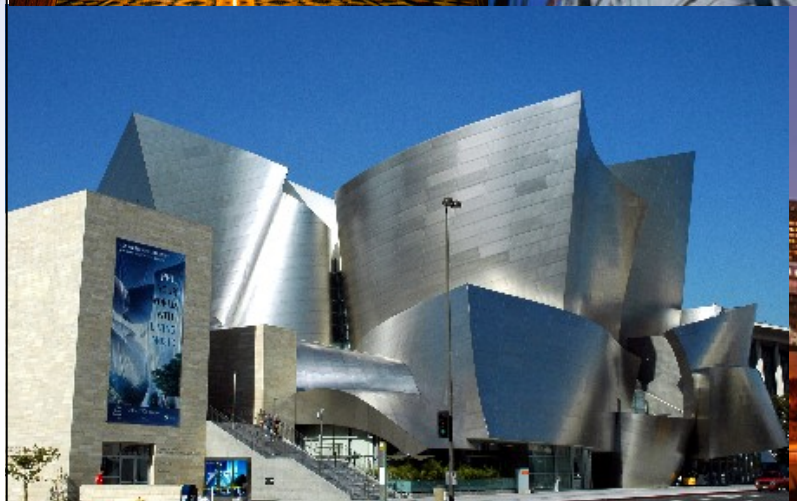
Review of LADWP Feed-In-Tariff Proposal for DWP Board

Frederick H. Pickel, Ph.D
Office of Public Accountability / Ratepayer Advocate, City of Los Angeles
opa@LAcity.org
tel. 213-482-6814

January 11, 2013





OPA Conclusions on LADWP's Proposed Feed-In-Tariff Proposal

- The proposed FIT pricing provides a substantial subsidy above the costs of other renewable energy sources.
  - FIT pricing of 17 cents/kWh, declining to 13 cents/kWh, is far above the "avoided cost" or incremental cost or market price of other renewable sources.
  - The avoided cost of renewables is estimated to be 9 to 12.5 cents/kWh.
- "Pay no more than avoided cost" has been the utility industry standard since 1978.
  - Paying more than avoided cost forces cost increases on LADWP's customers, and creates risk of job losses in the City's business sectors.
  - When prices for purchased power have been set above avoided cost, the excess costs and investment have created large secondary problems.
- The LADWP FIT 100 MW program creates an additional $100 million burden on LA's customers, a 40 to 44% premium over avoided cost.
  - This assumes 11 cents/kWh avoided cost versus FIT contracts at 17 cents/kWh to 13 cents/kWh, over the 20 year life of the 100 MW in FIT projects.
  - This $100 million FIT burden is in addition to the cost of the State's Renewable Portfolio Standard achieved through larger-scale projects and a technologies mix.

What's the Alternative?

- Some FIT-scale developers claim they can create profitable projects with FIT pricing at 11 to 12 cents/kWh (with time-of-day adjustments as proposed by DWP's contract appendix), so pricing above avoided costs is unnecessary.
- FIT pricing at a reasonable estimate of avoided cost from renewables, 11 cents/kWh with DWP's time-of-day adjustments, can eliminate the higher FIT pricing burden.
  - This would allow the most efficient developers to move ahead in a period with declining costs for solar facilities.
  - LADWP's contracting and interconnection study processes have to be continuously streamlined to facilitate this development.
- The program should be assessed in 6 months.
  - If it is moving to full subscription, an extension at lower pricing may be warranted.
  - If the program is having issues with low subscription levels, it should not be priced above avoided cost. In this case, the State FIT efforts should be reconsidered in light of high costs and customer burden (the State impact could be 10 times LA's for a State-wide 1,000 MW program).

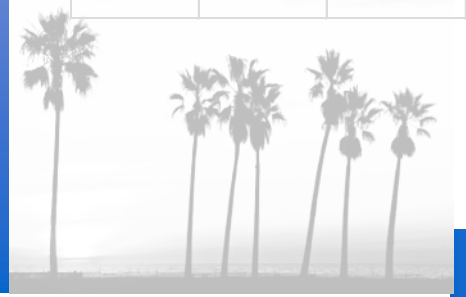
SUPPORTING ANALYSIS

DWP FIT as Proposed

FIT Tier in MW	MW in Tier	FIT Pricing ($/kWh)	Estimated Average Time-of-Day Adjusted FIT Pricing Multiplier	FIT Price on Summer pm Peak Price x2.25 multiplier ($/kWh)	FIT Pricing with Average ToD Multiplier ($/kWh)	Avoided Cost ($/ kWh)	Over-Payment ($/kWh)	MWh / yr at 19.6% Cap Factor	Over-Payment per Year	Undiscounted Over-Payment 20 yr Term	Discounted Over-Payment 20 yr Term at DWP Cost of Debt 5%
0-10	10	$ 0.170	1.054	$ 0.383	$ 0.179	$ 0.110	$ 0.069	17,170	$ 1,187,793	$ 23,755,859	$ 14,802,525
10-25	15	$ 0.160	1.054	$ 0.360	$ 0.169	$ 0.110	$ 0.059	25,754	$ 1,510,238	$ 30,204,760	$ 18,820,904
25-50	25	$ 0.150	1.054	$ 0.338	$ 0.158	$ 0.110	$ 0.048	42,924	$ 2,064,644	$ 41,292,888	$ 25,730,033
50-75	25	$ 0.140	1.054	$ 0.315	$ 0.148	$ 0.110	$ 0.038	42,924	$ 1,612,225	$ 32,244,509	$ 20,091,893
75-100	25	$ 0.130	1.054	$ 0.293	$ 0.137	$ 0.110	$ 0.027	42,924	$ 1,159,806	$ 23,196,130	$ 14,453,752
				Current Scenario	$ 0.154	$ 0.110	$ 0.044		$ 7,534,707	$ 150,694,145	$ 93,899,107

Summary for FIT Base Price of $0.17/kWh, stepping down in blocks, plus ToD adjustments

Avg FIT Price, $/kWh	Avoided Cost, $/kWh	Over-Payment, $/kWh	Over-Payment %	Annual Over-Payment	Undiscounted 20 Yr Over-Payment	Discounted 20 Yr Over-Payment
$ 0.154	$ 0.125	$ 0.029	23%	$ 4,959,267	$ 99,185,345	$ 61,803,432
$ 0.154	$ 0.110	$ 0.044	40%	$ 7,534,707	$ 150,694,145	$ 93,899,107
$ 0.154	$ 0.090	$ 0.064	71%	$ 10,968,627	$ 219,372,545	$ 136,693,340



DWP FIT with LA BC Alternative

FIT Tier in MW	MW in Tier	FIT Pricing ($/kWh)	Estimated Average Time-of-Day Adjusted FIT Pricing Multiplier	FIT Price on Summer pm Peak Price x2.25 multiplier ($/kWh)	FIT Pricing with Average ToD Multiplier ($/kWh)	Avoided Cost ($/ kWh)	Over-Payment ($/kWh)	MWh / yr at 19.6% Cap Factor	Over-Payment per Year	Undiscounted Over-Payment 20 yr Term	Discounted Over-Payment 20 yr Term at DWP Cost of Debt 5%
0-20	20	$ 0.170	1.054	$ 0.383	$ 0.179	$ 0.110	$ 0.069	34,339	$ 2,375,586	$ 47,511,717	$ 29,605,051
20-40	20	$ 0.160	1.054	$ 0.360	$ 0.169	$ 0.110	$ 0.059	34,339	$ 2,013,651	$ 40,273,014	$ 25,094,538
40-60	20	$ 0.150	1.054	$ 0.338	$ 0.158	$ 0.110	$ 0.048	34,339	$ 1,651,716	$ 33,034,310	$ 20,584,026
60-80	20	$ 0.140	1.054	$ 0.315	$ 0.148	$ 0.110	$ 0.038	34,339	$ 1,289,780	$ 25,795,607	$ 16,073,514
80-100	20	$ 0.130	1.054	$ 0.293	$ 0.137	$ 0.110	$ 0.027	34,339	$ 927,845	$ 18,556,904	$ 11,563,002
				Current Scenario	$ 0.158	$ 0.110	$ 0.048		$ 8,258,578	$ 165,171,552	$ 102,920,131

Summary for FIT Base Price of $0.17/kWh, stepping down in 20 MW blocks, plus ToD adjmnts

Avg FIT Price	Avoided Cost	Over-Payment, $/kWh	Over-Payment %	Annual Over-Payment	Undiscounted 20 Yr Over-Payment	Discounted 20 Yr Over-Payment
$ 0.158	$ 0.125	$ 0.033	26%	$ 5,683,138	$ 113,662,752	$ 70,824,456
$ 0.158	$ 0.110	$ 0.048	44%	$ 8,258,578	$ 165,171,552	$ 102,920,131
$ 0.158	$ 0.090	$ 0.068	76%	$ 11,692,498	$ 233,849,952	$ 145,714,365