

Renewable Energy Potential in Marin County

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Today's Talk

- Renewable Resource Potential in Marin County
- Options for County to facilitate private investment



Summary Results

Technology	Rated MW (low-high)	GWh/yr (low - high)	Actual MW (low-high)	Million Therms/Yr (low-high)	Deployment Potential
Solar	220	280 - 350	32 – 40	6.0 - 7.3	High
Wind* (On-Shore)	39 - 120	60 - 182	7 - 22	n/a	Medium
Wind* (Off-shore)	130 - 260	200 - 400	23 – 46	n/a	Low
Methane capture (landfill gas, dairies)	6.5	49	5.5	n/a	High
Biomass (solid waste to fuel)	9.0 - 18	67 – 135	7.7 – 16	n/a	Medium
Wave Power**	150	130	15	n/a	Low
TOTAL	550 – 775	790 – 1,250	90 – 145	6 - 7.3	

For reference, Marin County used 1,421 GWh in 2005.

*Wind power estimates do not include placement of turbines in protected park/wilderness areas.

**Does not include tidal power. Tidal Power studies are currently underway for the Golden Gate; production estimates are being developed and the numbers presented here could change.



Wind Potential

SUMMARY		Rated MW (low-high)	GWh/yr (low - high)	Actual MW (low-high)
	On Shore (includes small and large systems)	39 - 120	60 - 182	7 - 22
	Off Shore	130 - 260	200 - 400	23 - 46
TOTAL		169 - 380	260 - 582	30 - 68

Note: Estimates do not include national parklands, wilderness preserves, or marine sanctuaries



Ocean Potential

SUMMARY		Rated MW (low-high)	GWh/yr (low - high)	Actual MW (low-high)
	Wave Power	150	130	15
TOTAL		150	130	15

Note: Does not include tidal power. Tidal Power studies are currently underway for the Golden Gate; production estimates are being developed and the numbers presented here could change.



Transportation

- Transportation sector emissions are 50% of total greenhouse gas emissions in the San Francisco Bay Area
- Specific solutions involve land use and other levels of government – beyond study scope
- County *could* provide financial and permitting incentives to create biofuels infrastructure



Recommended Options for Marin County

- 1-7 Years
 - Establish County program to help fund private investment in energy efficiency, and distributed renewable resources (solar, wind)
 - Facilitate bioenergy projects including waste to fuel and methane capture
 - Stimulate development of biofuels infrastructure
- 8 Years and beyond
 - Explore development of ocean power in Bay or ocean
 - Consider development of off-shore wind farms

