CALIFORNIA ENERGY COMMISSION

California's Status of Renewables

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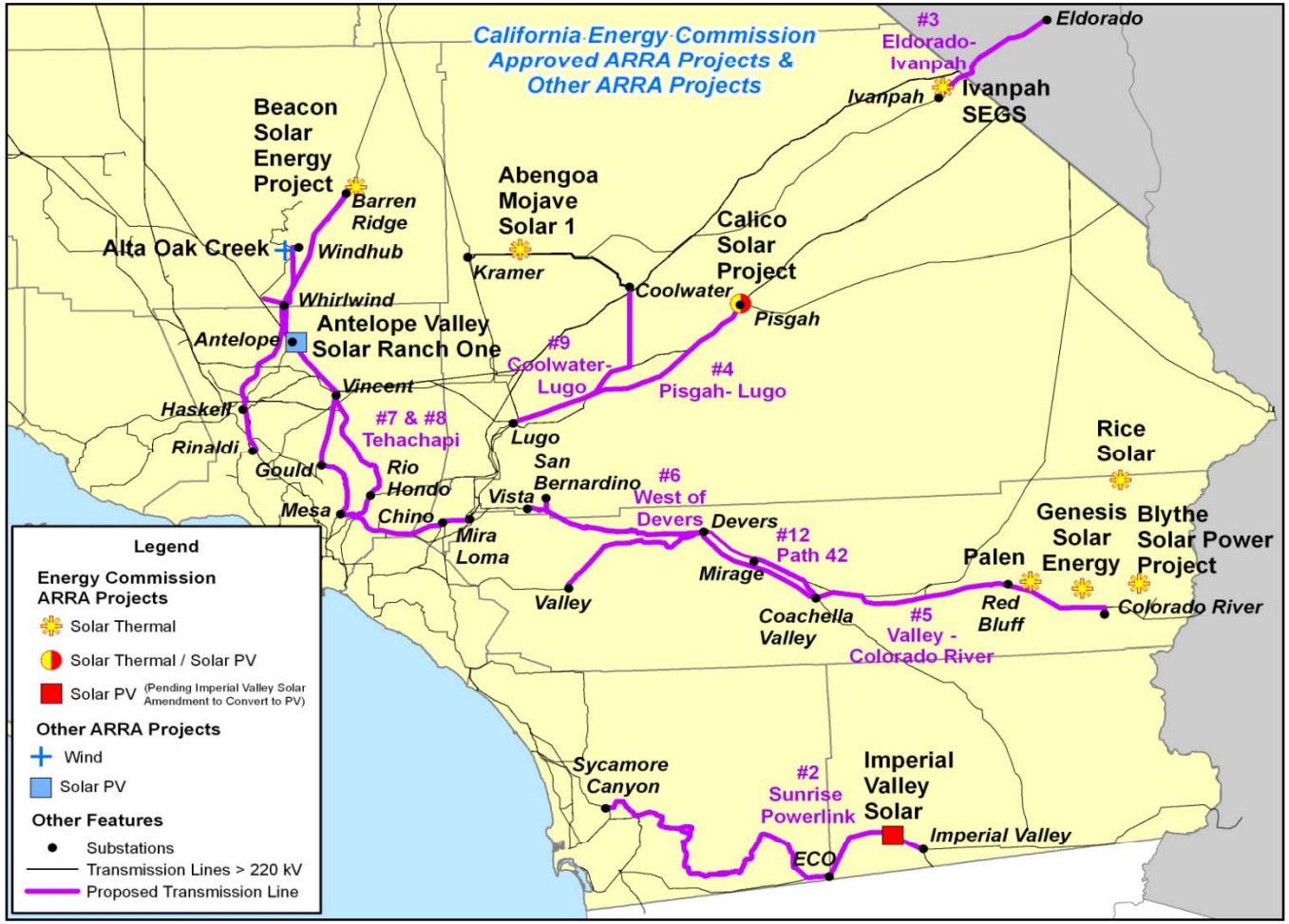
2010 Large-scale Renewable Projects

Major Renewable Energy Projects Permitted in 2010

Project	Capacity (MW)	Jobs	Substation or Transmission Line Interconnect	Current On-line Date (Transmission)	Capital Cost
Abengoa #	250	1200 construction 70 permanent	Coolwater-Kramer 230kv line and new Coolwater-Lugo 230 kV line	2017	$1.2 billion
Beacon*	250	850 construction 70 permanent	Barren Ridge 230 kV Substation	2/1/2012	$1 billion
Blythe*	1000	1,000 construction 300 permanent	Colorado River Substation and West of Devers Upgrade	2013; 2017	$4 billion
Calico*	663	400 construction 140 permanent	Pisgah Substation and Pisgah -Lugo upgrade	2017	Not available
Genesis #	250	1,000 construction 50 permanent	Colorado River Substation and West of Devers Upgrade	2013; 2017	$1 billion
Imperial Valley*	709	400 construction 240 permanent	Imperial Valley Substation		Not available
Ivanpah #	370	1,000 construction 100 permanent	Loop new sub connecting to Eldorado-Mtn Pass 115kV line; Ivanpah Substation 230kV; El Dorado – Ivanpah Transmission Project	6/30/2010 6/30/2012 2013	$1.1 billion
Palen*	500	900 construction 170 permanent	Red Bluff Substation and West of Devers Upgrade	7/1/2013; 2017	$2 billion
Rice	150	300 construction 50 permanent	Plan to interconnect into WAPA sub.	No CAISO upgrades needed	$850 million
Alta (Oak Creek) #	800	50 permanent	Whirlwind Substation 230kV	2012	$600 million
AV Solar Ranch One #	245	400 construction 20 permanent	Tehachapi Conceptual Substation #1	Unavailable	Not available
Total	**5,200**	**7,450 construction jobs** **1,260 permanent jobs**			

*Converting to PV or have announced an intention to convert.
Project has already begun construction

ARRA Projects and Proposed Transmission Upgrades



Transmission underway to meet 33% RPS in 2020

Total cost = $7.2 billion

Transmission upgrade		Approval status		Renewable Potential		Online
		ISO	CPUC	MW	TWh/Yr	
1	Carrizo-Midway	Pending LGIA	Not yet filed	900	2.1	2012
2	Sunrise Powerlink	Approved	Approved	1,700	4.1	2012
3	Eldorado-Ivanpah	LGIA	Approved	1,400	3.6	2013
4	Pisgah-Lugo	LGIA	Not yet filed**	1,750	4.1	2017
5	Valley-CO River	Approved	Approved*	4,700	8.6	2013
6	West of Devers	LGIA	Not yet filed			2017
7	Tehachapi	Approved	Approved	4,500	15.2	2015
8	Tehachapi Wind/ Solar Diversity	N/A	N/A	1,000	3.0	2015
9	Cool Water-Lugo	Pending LGIA	Not yet filed	600	1.4	2018
10	South Contra Costa	LGIA	Not yet filed	300	0.8	2015
11	Borden-Gregg	LGIA	Not yet filed	800	2.0	2015
12	Path 42	Pending approval	Not yet filed	1,400	3.5	2015
Other-Outside of ISO Grid		N/A	N/A	3,300	8.4	
Total				**22,350**	**56.8**	
TWh/year needed in ISO area to meet 33% goal:				***44***		

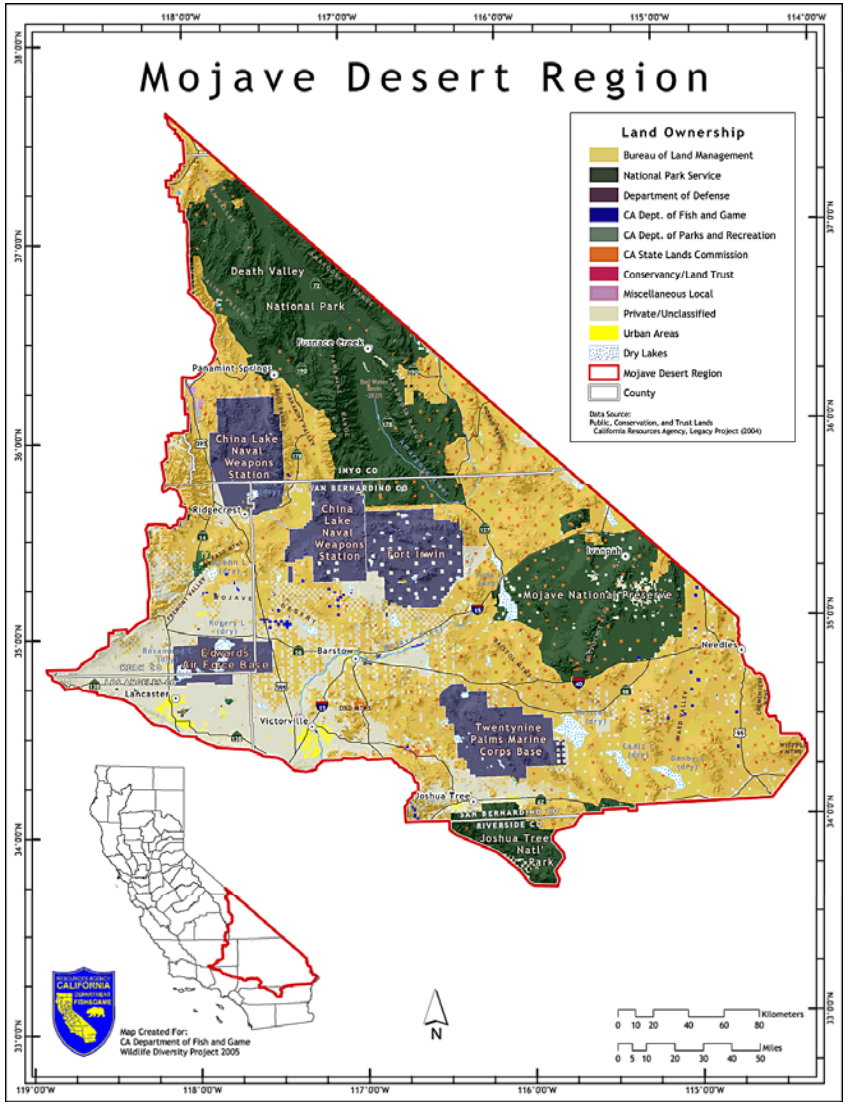
Desert Renewable Energy Conservation Plan

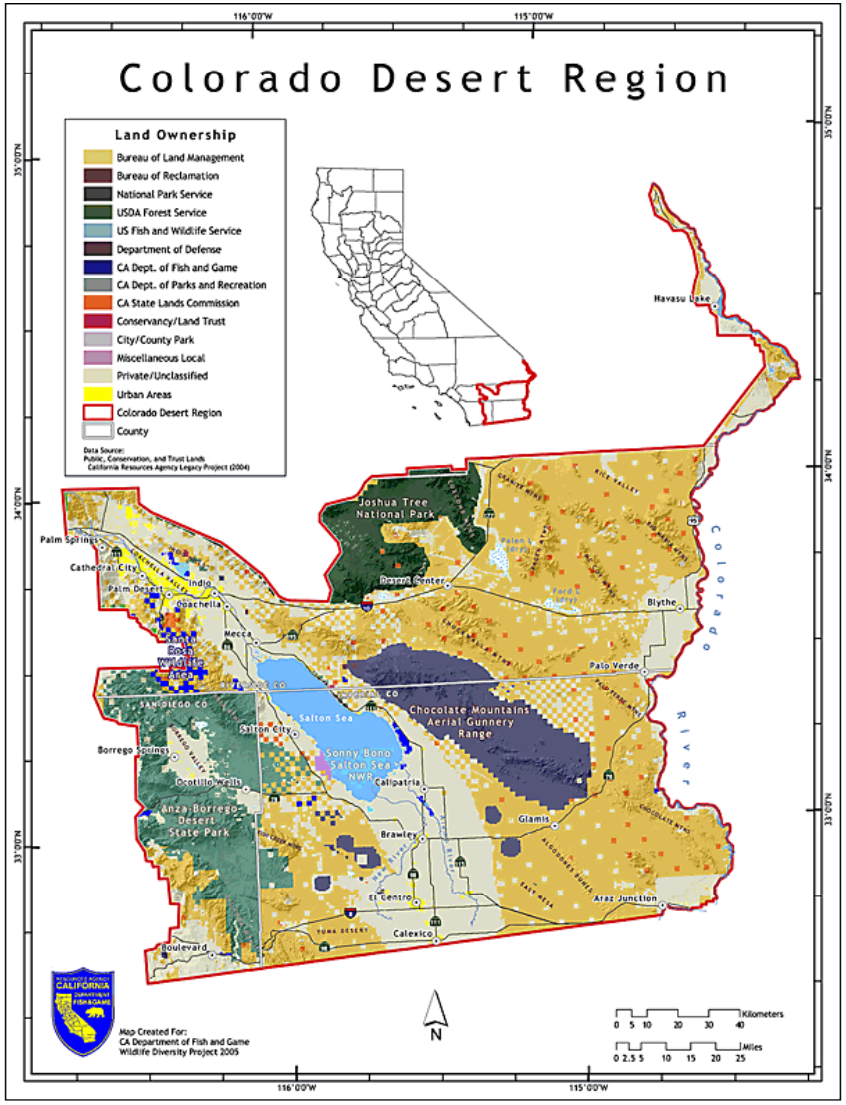
DRECP

- Desert Renewable Energy Conservation Plan (DRECP) process created by Governor's Executive Order in 2008
- Intended to facilitate project review and consider cumulative impacts of multiple renewable energy projects in CA Mojave and Colorado desert areas
- Identifying desert areas best suited for energy development and those best suited for resource conservation
- State/federal Renewable Energy Action Team overseeing Plan development
- Key factor - Diverse stakeholder & local govt. involvement
- Plan will be both a Natural Communities Conservation Plan (NCCP) and part of one or more Habitat Conservation Plans (HCPs)
- DRECP due to be completed by year end or early 2013
- Preliminary Conservation Strategy has been posted:

http://www.drecp.org/documents/preliminary_conservation_strategy/index.php

Regions of DRECP

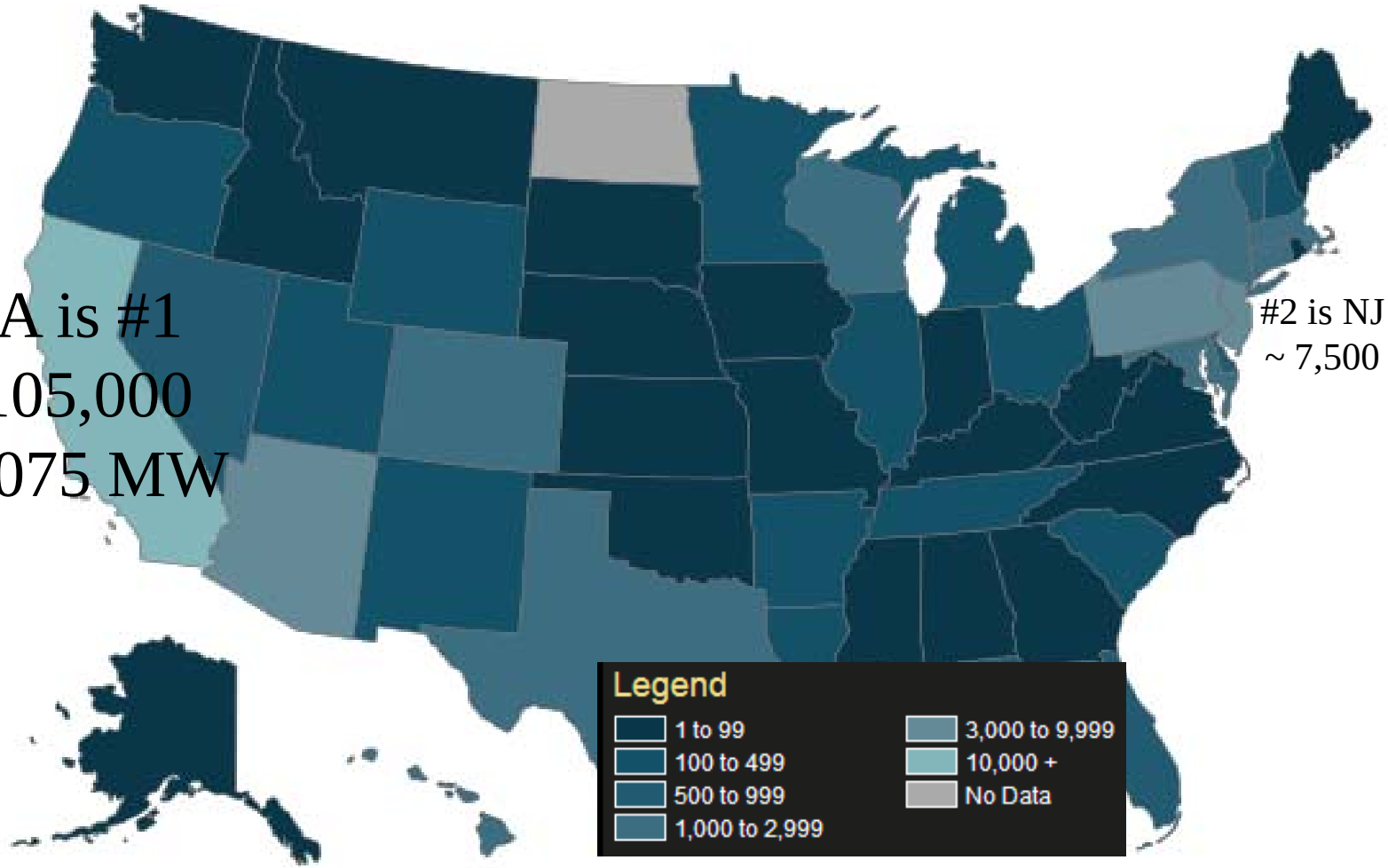




Governor's Clean Energy Jobs Plan includes 12,000 MW of Distributed Generation

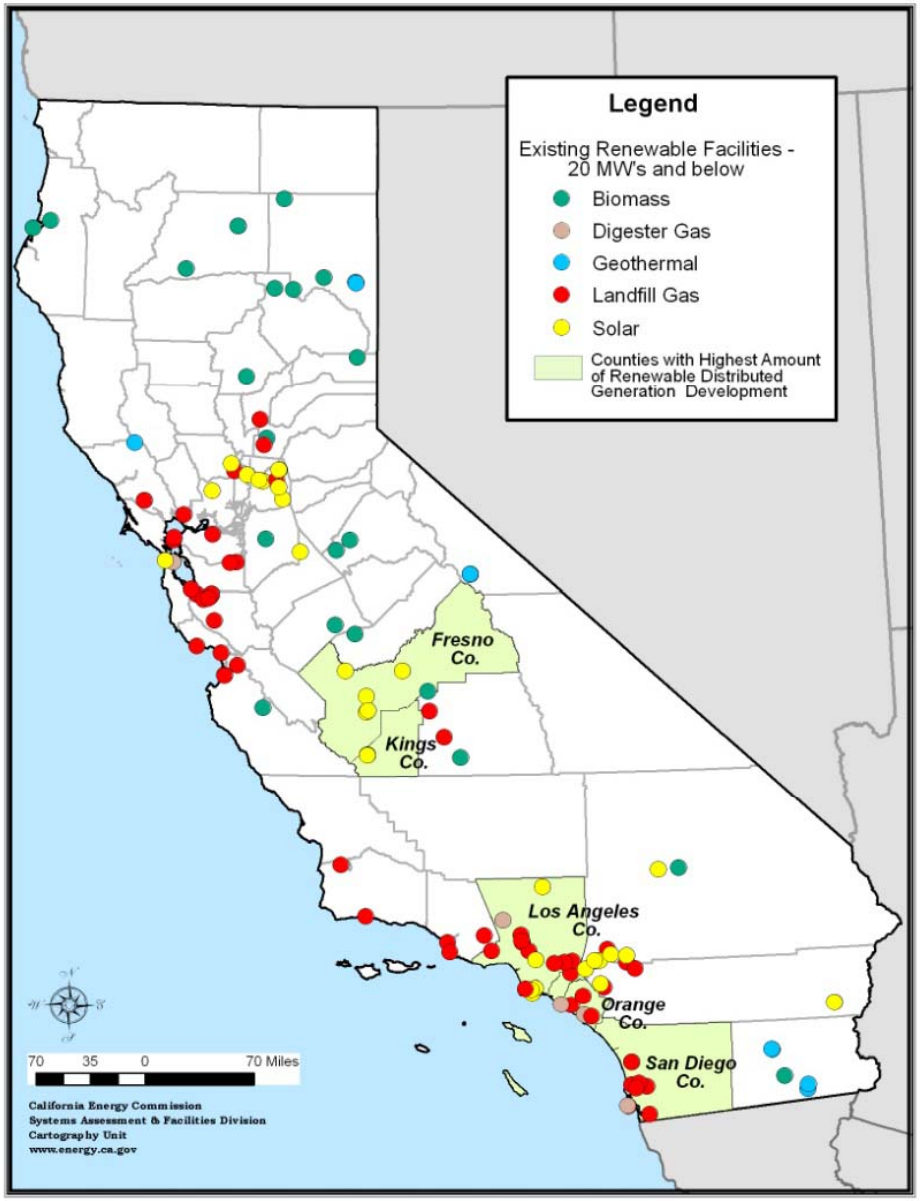
Number of PV Installations by State

CA is #1
~105,000
~1,075 MW



#2 is NJ
~ 7,500

Source: http://openpv.nrel.gov/rankings



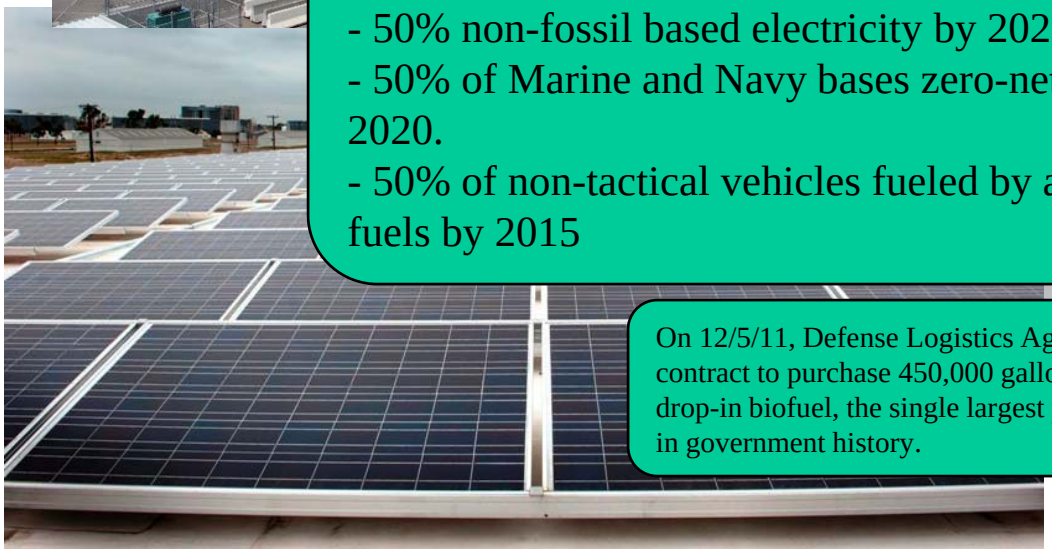
Wholesale Distributed Renewable Capacity in CA is ~2,700 MW

Next Steps for DG

- Continue work with Memorandum of Understanding state agency group to increase renewables installed on state property
- Continue to refine DG regional targets
- Develop a Renewable Strategic Plan for the 2012 Integrated Energy Policy Report Update

DOD Military Energy Goals

DOD overall goal of 25% renewables by 2025.
Secretary of the Navy goals:
- 50% non-fossil based electricity by 2020.
- 50% of Marine and Navy bases zero-net Energy by 2020.
- 50% of non-tactical vehicles fueled by alternative fuels by 2015



On 12/5/11, Defense Logistics Agency signed a contract to purchase 450,000 gallons of advanced drop-in biofuel, the single largest purchase of biofuel in government history.