Sustainability Innovations

CAPT John J. Hickey

Emergency Load Reduction

Benefits of ELRP

Incentives

Protect the Community

Environmental Protection

Protect Your Operations

ELRP Incentives

ELRP Incentives

Hono Has Money

Base Honolulu

- Exterior Lighting & Solar Domestic HW

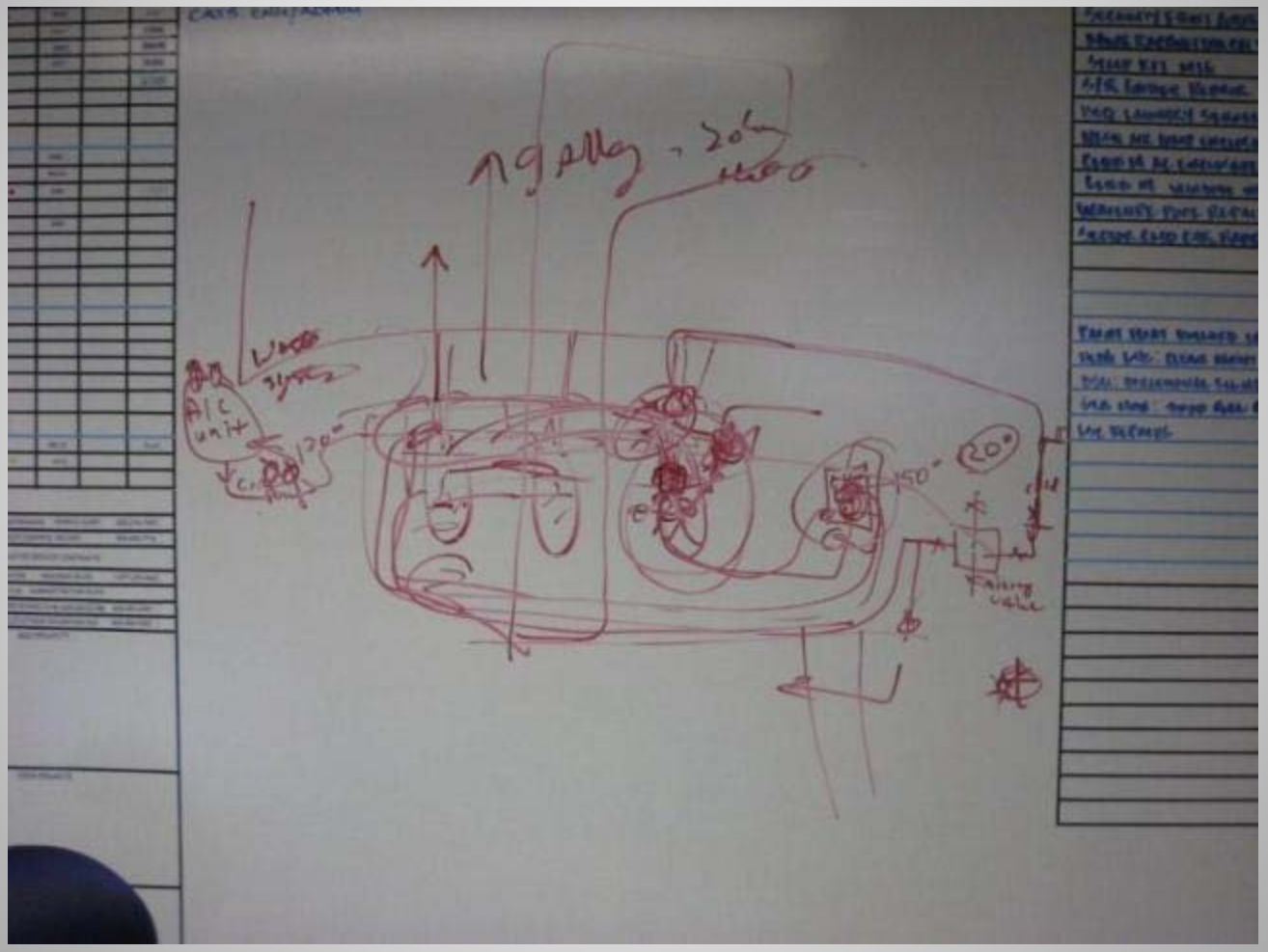
Base Honolulu

- Photovoltaics & Vending

Base Honolulu

- Conservation Voltage Reg & Cutter Retrofits

Chiller Waste Heat Recovery



AIR STATION BARBERS POINT VERTICAL AXIS TURBINE

Energy Savings Performance Contracts

14 Contracts Awarded

$100 Million Invested

14% Energy Savings

Kodiak ESPC

Leadership


View of ISC Kodiak

The Integrated Support Command Kodiak Energy Saving Performance Contract Team:(top row) FD&CC Seattle: Bob Mallahan, Project Manager; Kristina Meabon, Contracting Officer; Ed Rockenstire, Senior Contracting Officer
(bottom row) Danny Gore, National Energy Program Manager, Headquarters; Jesse Maestas, Financial Analyst, Headquarters; Mike Brown, Facility Engineer, ISC Kodiak.

The U.S. Coast Guard's Integrated Support Command Kodiak, Alaska entered into an energy savings performance contract (ESPC) with NORESCO to install $20 million in energy efficiency projects. Contracting and administrative support was provided by the Facilities Design and Construction Center Seattle and the Coast Guard's National Energy Program. Facility improvements include lighting retrofits; a centralized steam system and piping system upgrades; variable frequency drives; combustion controls; boiler economizers; various refrigeration and HVAC upgrades; and highly efficient washers, dryers, and water fixtures. These and other measures will result in annual energy and water savings of 81 billion Btu and 49 million gallons.

Integrated Support Command
Kodiak, AK

YOU HAVE the POWER™

U. S. Department of Homeland Security

Federal Energy Management Program

For more information on how you can get involved in the YOU HAVE the POWER campaign, visit the FEMP Web site at www.eere.energy.gov/femp.

Energy Savings Performance Contracts

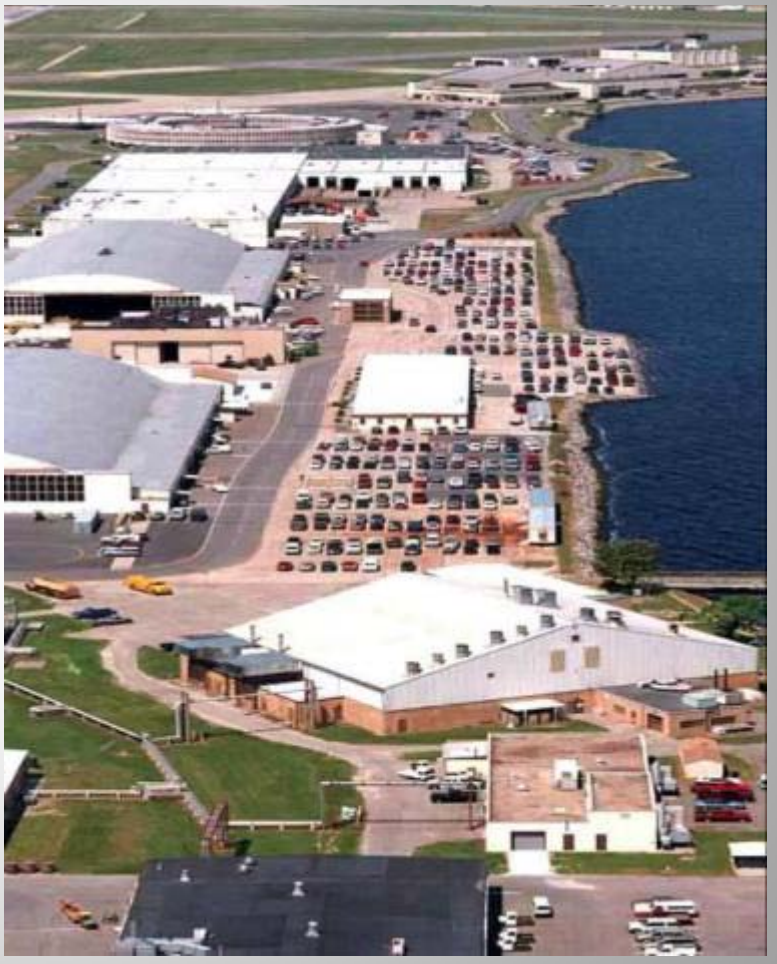
Construction Phase

- Sector New York
- USCG Academy

Energy Savings Performance Contracts

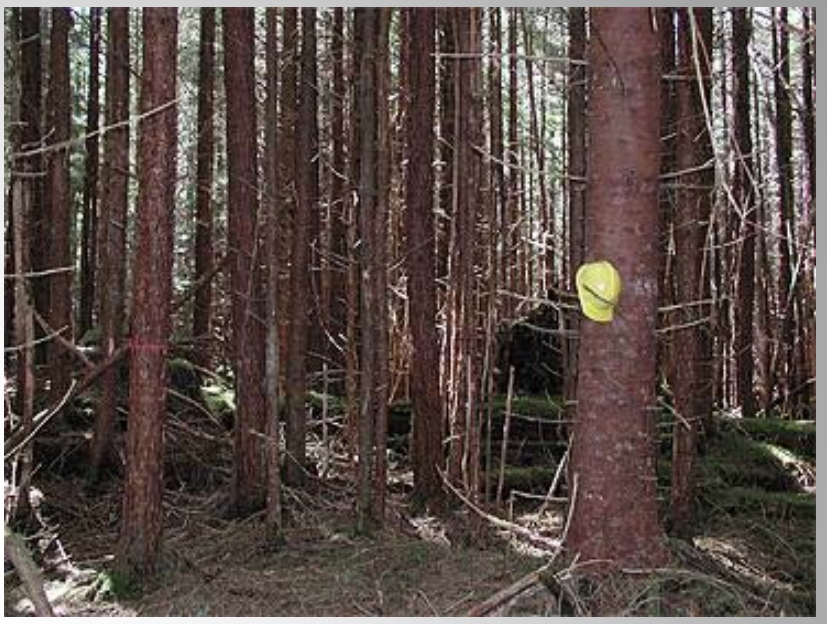
In Development

- Cape May
- Puerto Rico
- Portsmouth
  Yorktown
  Elizabeth City
- UESC's



JUNEAU
WIND FOR SCHOOLS

Alaska



The Saudi Arabia of Biomass

Aircraft Hangar Lighting

Training Center Petaluma Model Unit

Petaluma PV PPA

1 MW Total Solar Power

Sector San Francisco
Renewable Energy

High Performance Buildings
Seattle Operations Bldg
LEED Silver

High Performance Buildings

25% More Efficient than code

LEED Silver Housing

LEED Gold Housing

LEED Gold Housing

High Performance Buildings
Station Marquette – LEED Certified

High Performance Buildings

Station Marquette LEED Certified

40% Water Savings

High Performance Buildings

- Ground Source Heat Pumps

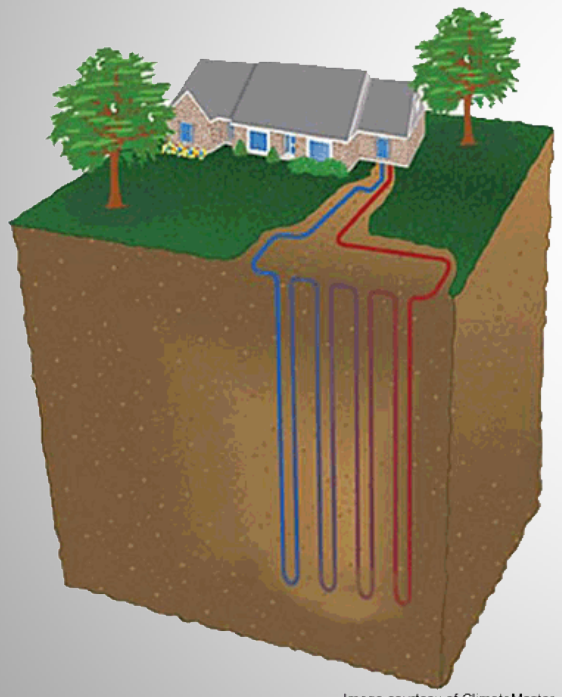


Image courtesy of ClimateMaster

CUTTER LIGHTING RETROFITS

Aton Initiatives

Lighthouse Solarization

LED Aids to Navigation

Reliability through Renewables

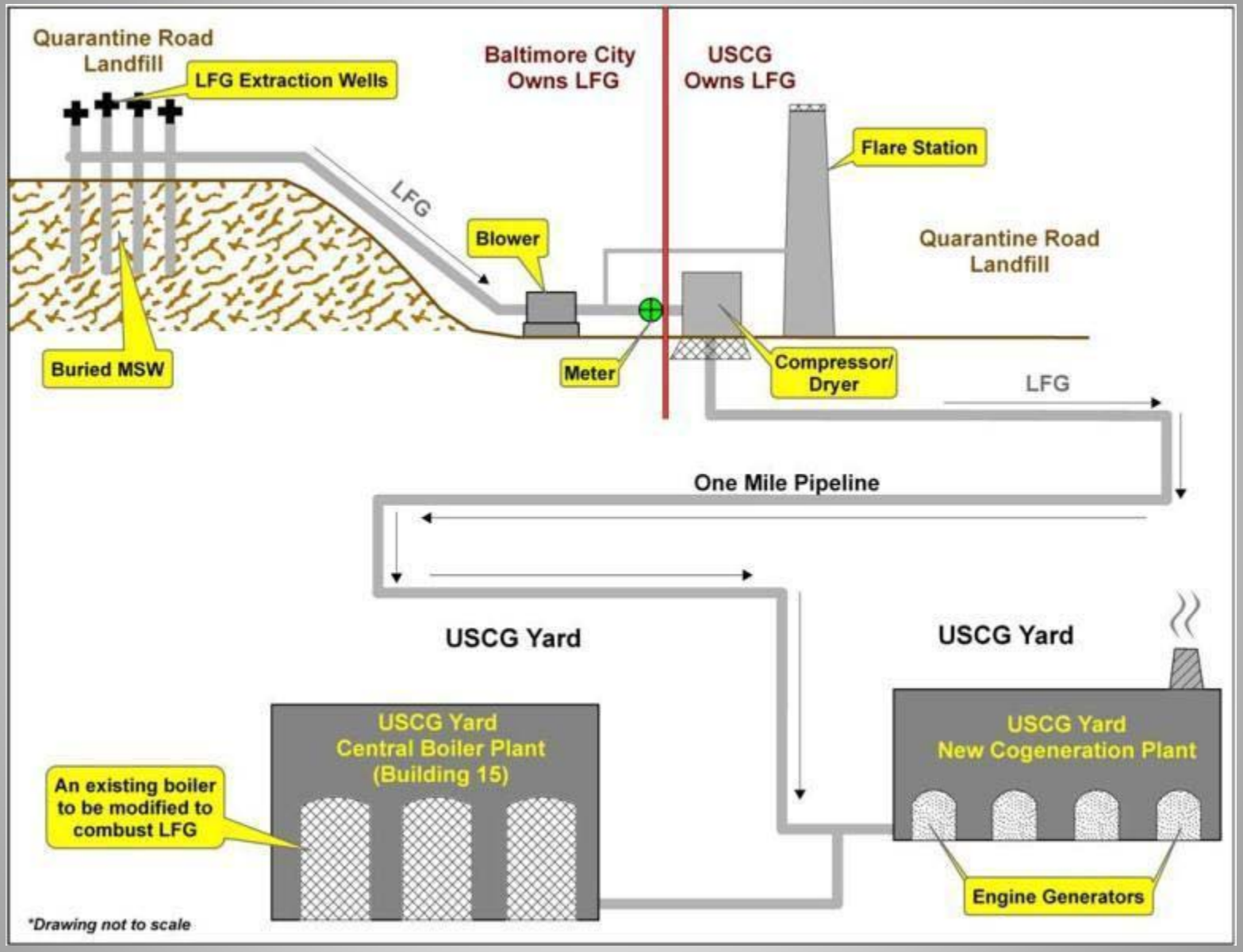
Readiness through Renewables


01/10/2007

Rescue 21 Wind Power

Shipyard Renewable Energy

- Landfill Gas Co-Generation Plant (4 Megawatts)
- 100% Renewable Energy Project
- Operational April 2009


Quarantine Road Landfill
LFG Extraction Wells
Baltimore City Owns LFG
USCG Owns LFG
Flare Station
LFG
Blower
Quarantine Road Landfill
Buried MSW
Meter
Compressor/ Dryer
LFG
One Mile Pipeline
USCG Yard
USCG Yard
USCG Yard Central Boiler Plant (Building 15)
USCG Yard New Cogeneration Plant
An existing boiler to be modified to combust LFG
Engine Generators
*Drawing not to scale

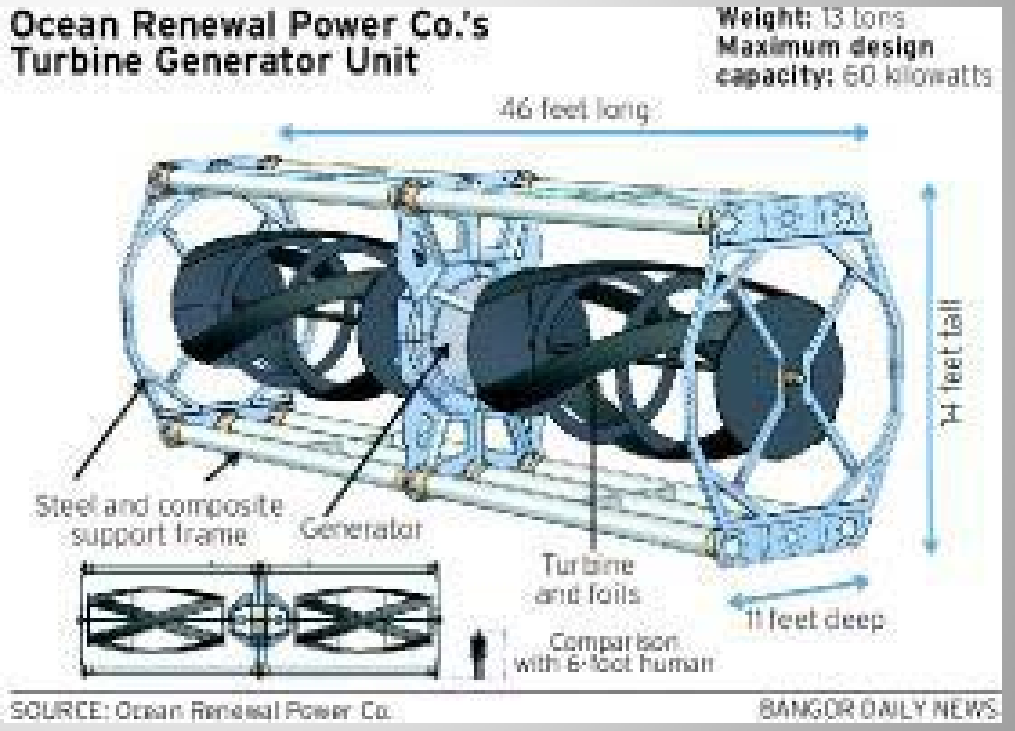
SOUTHWEST HARBOR HOUSING

Earth Day 2010

SOUTHWEST HARBOR HOUSING

Tidal Energy

The Kitty Hawk of Tidal Energy



BASE PORTSMOUTH

USCGA SUSTAINABILTY

SUSTAINABILITY

GUARDIAN - YOU SAVE LIVES, NOW SAVE A PLANET.

UNITED STATES COAST GUARD
ENERGY MANAGEMENT PROGRAM

Renewable Power Tools

Dan Ingold

WESTON SOLUTIONS

The Trusted Integrator for Sustainable Solutions

Toolbox Needs

Know your usage

Define your renewable resources

Find out what incentives and other help is available

Try some economic models to determine output and savings

USCG Utility Bill Access

BSU Alameda – One Month's Natural Gas Bill

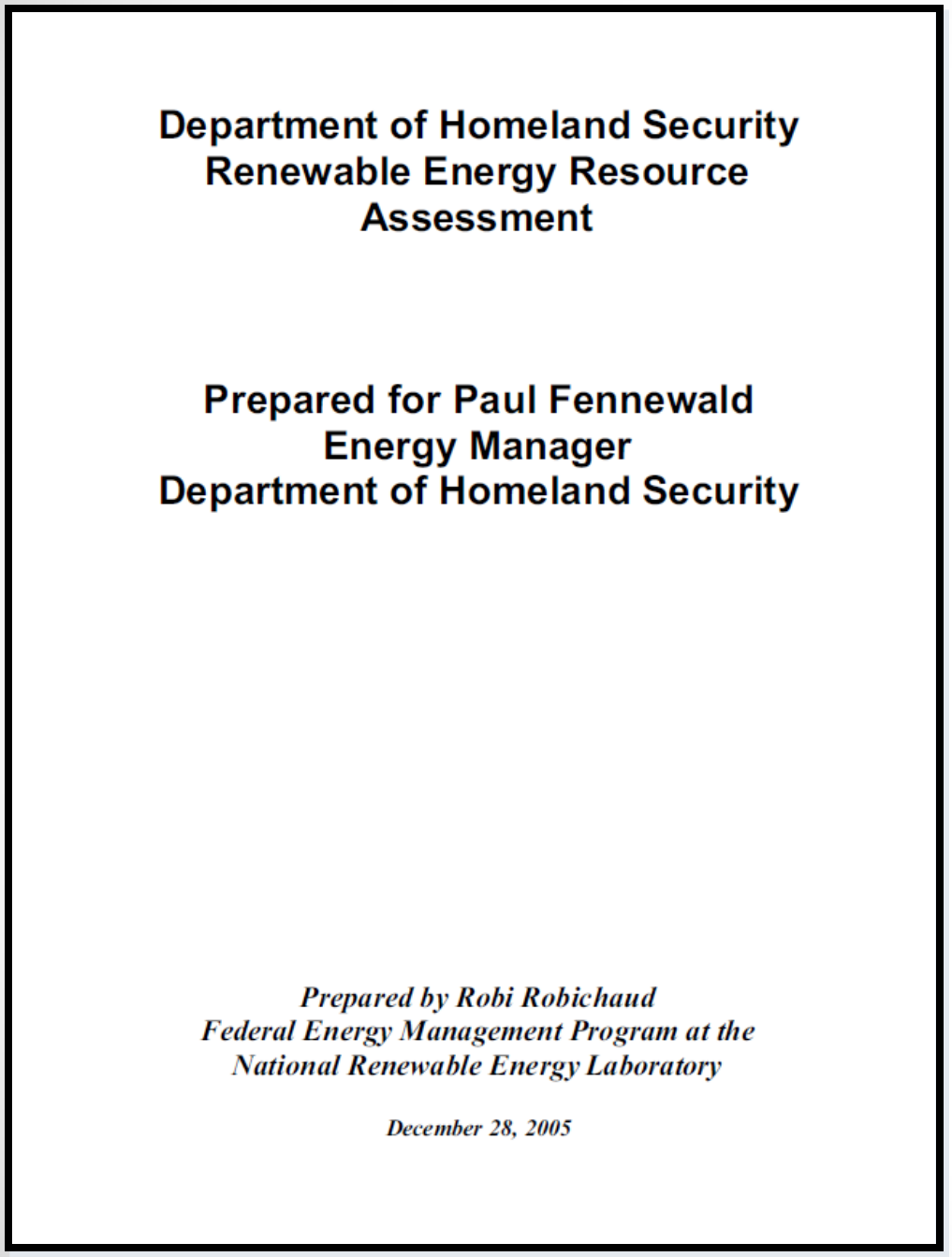
Utility Bill Access Made Easier

https://cgweb.fincen.uscg.mil/shoreenergy/


uard Finance Center Intranet (cgweb.fincen.uscg.mil) - Windows Internet Explorer provided by URS Denver
https://cgweb.fincen.uscg.mil/shoreenergy/cons.htm
Favorites Tools Help
Search Share Sidewiki Bookmarks Check Translate AutoFill
U.S. Coast Guard Financ...
Benefiting Unit/Cost Center ...
U.S. Coast Guard
Finance Center Intranet
...Providing business solutions to enhance mission execution now and into the future.
Home Apps/Reports Publications User Tools Site Map About FINCEN
Search Go
USCG FINCEN Utility Portal ~ Consumption Data Search
Use this query to pull utility consumption data and view invoice images in either HTML or MS Excel format by Utility Type, Account Number, OPFAC, Cost Center and Date Range. The Utility Type and Date Range fields are mandatory. To increase query performance, please enter as many variables as possible.
*Utility Type:
Account No.:
OPFAC:
Cost Center:
*Date Range:
From Date: mm/dd/yy
To Date: mm/dd/yy
HTML
Excel
* Required field
Retrieve Results
USCG Home DHS.gov Privacy & Security Disclaimer Accessibility Coordinator Contact Us Download Plug-ins

USCG FINCEN Utility Portal ~ Consumption Data Search

Util Type	Invoice Date	Account No.	OPFAC	CostCtr	Vendor Name	Service Location Address	Unit Name	City	State	Usage	Units	Amount	ViewDoc
NatGas	10/26/09	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	6310.27933	TD - THERMS	5507.47	
NatGas	11/24/09	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	15304.22460	TD - THERMS	14409.41	
NatGas	12/28/09	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	33117.41791	TD - THERMS	28297.28	
NatGas	01/26/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	34569.34468	TD - THERMS	31284.66	
NatGas	02/25/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	27757.13716	TD - THERMS	27064.06	
NatGas	03/30/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	26495.18538	TD - THERMS	19854.34	
NatGas	04/28/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	21891.29707	TD - THERMS	18568.26	
NatGas	05/26/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	3.45860	TD - THERMS	13065.86	
NatGas	06/27/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	11175.75952	TD - THERMS	9368.00	
NatGas	07/27/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	6747.99283	TD - THERMS	5996.42	
NatGas	08/27/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	7154.78356	TD - THERMS	6580.32	
NatGas	09/27/10	0010948332	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	EAGLE & HUDSON	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	5925.52501	TD - THERMS	5506.76	
NatGas	10/26/09	9885947700	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	GOVT ISLAND TRAINING CENTER	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	39.23694	TD - THERMS	38.61	
NatGas	11/24/09	9885947700	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	GOVT ISLAND TRAINING CENTER	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	38.14985	TD - THERMS	42.23	
NatGas	12/28/09	9885947700	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	GOVT ISLAND TRAINING CENTER	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	41.37520	TD - THERMS	43.96	
NatGas	01/26/10	9885947700	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	GOVT ISLAND TRAINING CENTER	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	48.64448	TD - THERMS	54.13	
NatGas	02/25/10	9885947700	47500	52145	PACIFIC GAS AND ELECTRIC COMPANY	GOVT ISLAND TRAINING CENTER	USCG INTEGRATED SUPPORT COMMAND ALAMEDA	ALAMEDA	CA	41.40568	TD - THERMS	48.14	



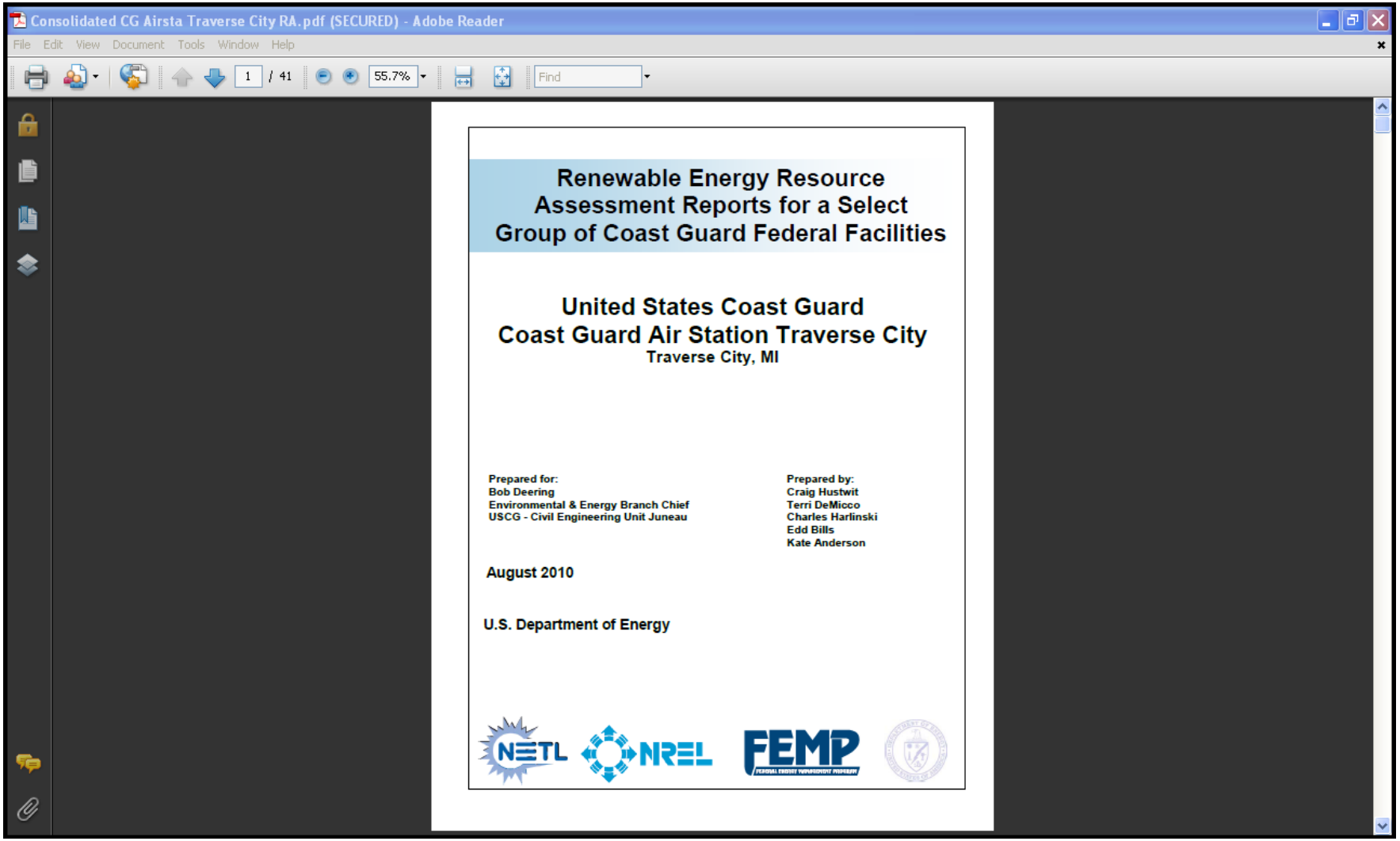
Ranking of Solar, Wind, Biomass, and Geothermal Resources

Table 1 Compilation of USCG renewable energy resources

Active USCG sites ranked for overall renewable energy resource availability

ATU_ OPFAC	NREL Recno	Active _ Station	NAME	Latitude	Longitude	City	State	Wind	Solar fixed tilt	Solar horizontal	Solar vertical	Biomass	Geothermal	Total Renewable Resource Assessment
14-30143	3759	Y	CG STA MAUI	20.8	-156.5	WAILUKU	HI	20	16	16	0	0	8	60
08-40115	2442	Y	CG LORSTA LAS CRUCES	32.1	-106.7	LA MESA	NM	0	20	16	8	0	16	60
11-40137	2448	Y	CG LORSTA SEARCHLIGHT	35.5	-114.9	SEARCHLIGHT	NV	0	20	16	12	0	12	60
46-68160	2917	Y	CG RUITOFF ALBUQUERQUE	35.1	-106.6	ALBUQUERQUE	NM	0	20	16	12	0	12	60
46-68174	3065	Y	CG RUITOFF PHOENIX	33.5	-112.1	PHOENIX	AZ	0	20	16	12	0	12	60
08-40116	2428	Y	CG LORSTA BOISE CITY	36.6	-102.8	FELT	OK	4	16	12	8	0	12	52
11-30670	3752	Y	CG STA LAKE TAHOE	39.2	-120.1	TAHOE CITY	CA	0	16	12	8	0	16	52
11-40139	2434	Y	CG LORSTA FALLON	39.5	-118.8	FALLON	NV	0	16	12	8	0	16	52
11-40141	2445	Y	CG LORSTA MIDDLETOWN	38.8	-122.6	MIDDLETOWN	CA	0	16	12	8	0	16	52
21-32460	524	Y	CG CAMSPAC SAN FRAN	38.1	-122.8	PT REYES STA	CA	0	16	12	8	0	16	52
33-51252	2819	Y	378 WHEC MAT-ALAMEDA	37.8	-122.3	ALAMEDA	CA	0	16	12	8	0	16	52
33-53740	1326	Y	CG ESD PETALUMA	38.2	-122.7	PETALUMA	CA	0	16	12	8	0	16	52
58-34360	3919	Y	CG PACIFIC STRIKE TEAM	38.1	-122.5	NOVATO	CA	0	16	12	8	0	16	52
01-33130	2521	Y	CG MIO NEW YORK	40.7	-74.0	NEW YORK	NY	4	8	4	4	20	8	48
01-36222	1462	Y	CG GROUP NEW YORK	40.7	-74.0	NEW YORK	NY	4	8	4	4	20	8	48
01-41855	4329	Y	CGI VTS NEW YORK	40.7	-74.0	GOVERNORS ISL	NY	4	8	4	4	20	8	48
32-45000	4037	Y	CPRO GOVERNORS ISLAND	40.7	-74.0	NEW YORK	NY	4	8	4	4	20	8	48
44-68129	3044	Y	CG RUITOFF NEW YORK	40.7	-74.0	NEW YORK	NY	4	8	4	4	20	8	48
47-77103	682	Y	CGIS DET NEW YORK	40.7	-74.0	NEW YORK	NY	4	8	4	4	20	8	48
11-30462	3705	Y	CG STA BODEGA BAY	38.3	-123.1	BODEGA BAY	CA	8	12	8	4	0	16	48
14-31250	497	Y	CG BASE HONOLULU	21.3	-157.9	HONOLULU	HI	8	16	16	0	0	8	48
14-37340	3305	Y	SEC HONO ADMIN/PERS DIV	21.3	-157.9	HONOLULU	HI	8	16	16	0	0	8	48
14-40301	2865	Y	CG OMSTA HAWAII	21.5	-157.9	KANEOHE	HI	8	16	16	0	0	8	48
14-41990	213	Y	CG ANT HONOLULU	21.3	-157.9	HONOLULU	HI	8	16	16	0	0	8	48
21-34268	2791	Y	MSST 91107 HONOLULU	21.3	-157.9	HONOLULU	HI	8	16	16	0	0	8	48
33-47810	2102	Y	CG ISC HONOLULU	21.3	-157.9	HONOLULU	HI	8	16	16	0	0	8	48
33-51278	1369	Y	CG EMD ALAMEDA	37.8	-122.3	ALAMEDA	CA	0	12	12	8	0	16	48
33-51230	1370	Y	CG EMD HONOLULU	21.3	-157.9	HONOLULU	HI	8	16	16	0	0	8	48
33-51254	2820	Y	378 WHEC MAT-HONOLULU	21.3	-157.9	HONOLULU	HI	8	16	16	0	0	8	48
33-53500	1411	Y	ESU Honolulu	21.3	-157.9	HONOLULU	HI	8	16	16	0	0	8	48
47-77100	693	Y	CGIS DET PETALUMA	38.2	-122.7	PETALUMA	CA	0	16	12	4	0	16	48
11-20170	140	Y	AIRSTA SAN DIEG PERSRU	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
11-20253	160	Y	CG AIRSTA LOS ANGELES	33.9	-118.4	LOS ANGELES	CA	0	16	12	8	0	12	48
11-30888	3792	Y	CG STA SAN DIEGO	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
11-33255	2710	Y	CG MSO SAN DIEGO	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
11-36261	1557	Y	Group San Diego	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
11-37250	3545	Y	SEC SAN DIEGO ADMIN/PERS DI	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
11-41982	241	Y	CG ANT SAN DIEGO	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
11-73135	112	Y	CG ACTIVITIES SAN DIEGO	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
21-34269	2793	Y	MSST 91109 SAN DIEGO	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
21-34301	4100	Y	CG PACAREA TACLET	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
21-34404	520	Y	CG UNIT C3I CTR WEST	33.9	-117.3	MARCH AFB	CA	0	16	12	8	0	12	48
21-83101	1600	Y	NCWGRU ONE	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
21-83110	1590	Y	CGRU HDQU 110	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
33-53720	1360	Y	ESD SAN DIEGO	32.7	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
46-68175	3097	Y	CG RUITOFF SAN DIEGO	32.8	-117.2	SAN DIEGO	CA	0	16	12	8	0	12	48
46-68176	3081	Y	CG RUITOFF RIVERSIDE	34.1	-117.3	COLTON	CA	0	16	12	8	0	12	48
47-77100	687	Y	CGIS DET LA/LB	33.7	-118.3	SAN PEDRO	CA	0	16	12	8	0	12	48
47-77100	683	Y	CGIS DET HONOLULU	21.3	-157.9	HONOLULU	HI	0	16	16	8	0	8	48

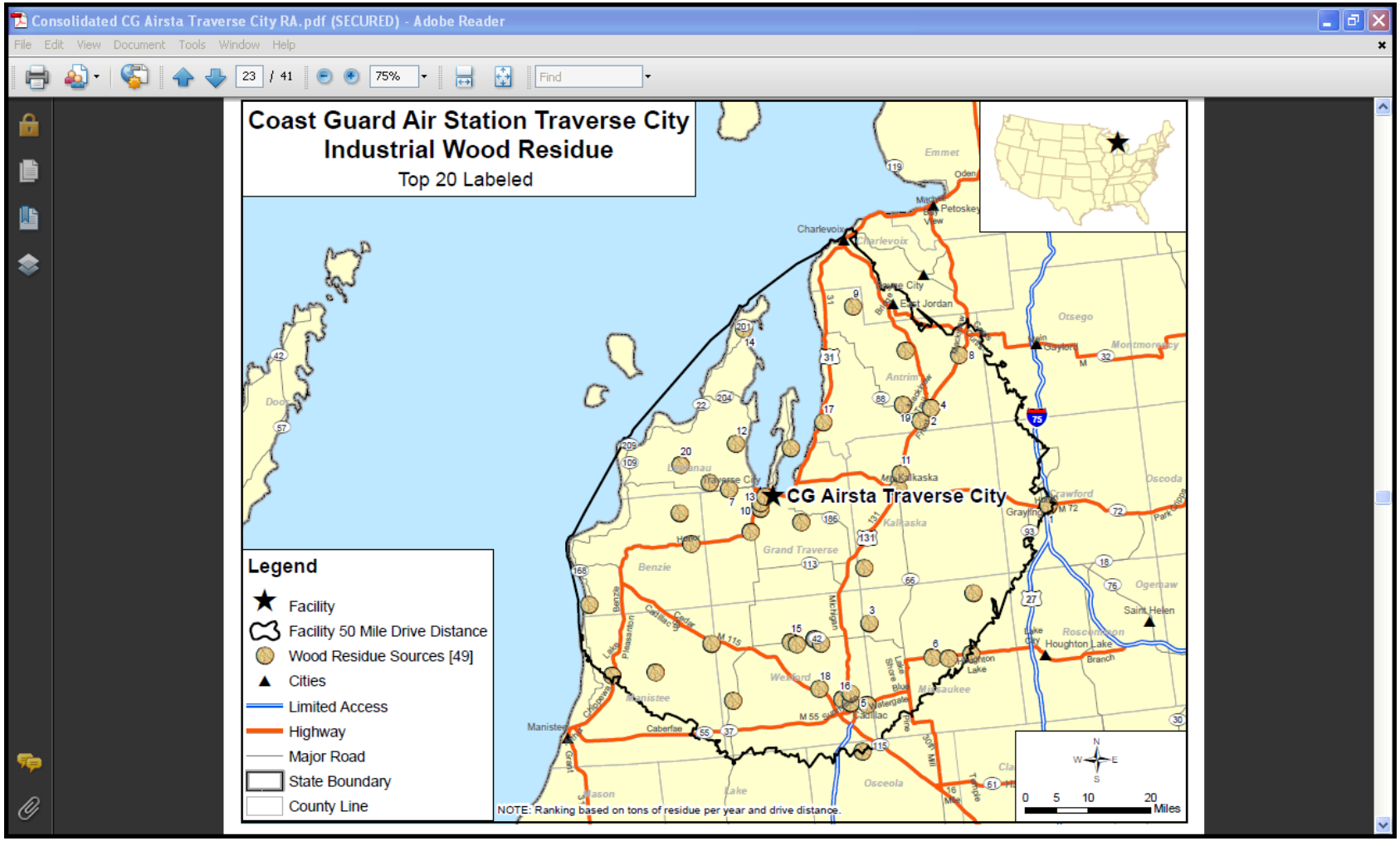
Renewable Energy Assessment
20 Great Lakes USCG Facilities



Ranking of Renewable Energy Resources

	Sources	Estimated MMBTU	Sources	Estimated MMBTU	Sources	Estimated MMBTU	Estimated Wood Residue (Green Tons / Year)		kWh/m²/day
Coast Guard Air Station Traverse City	2	23,924	1	7,878	49	303,615	112,450	Marginal / Fair	4.00 - 4.25
Coast Guard Base Sault Ste Marie	0	n/a	2	61,167	4	28,431	10,530	Marginal	4.00 - 4.25
Coast Guard Marine Safety Office Detroit	15	Unknown	2	283,595	128	687,960	254,800	Marginal	4.00 - 4.25
Coast Guard Station Calumet Harbor	6	1,734,140	6	1,559,530	243	2,585,115	957,450	Marginal	4.25 - 4.50
Coast Guard Station Charlevoix	1	9,944	0	n/a	32	251,667	93,210	Fair	4.00 - 4.25
Coast Guard Station Erie	1	232,525	1	63,577	55	398,034	147,420	Fair / Good	4.00 - 4.25
Coast Guard Station Fairport	1	124,331	3	27,525	102	572,130	211,900	Good	4.00 - 4.25
Coast Guard Station Frankfort	0	n/a	0	n/a	25	77,220	28,600	Good / Excellent	4.00 - 4.25
Coast Guard Station Grand Haven	2	132,872	1	6,182	91	951,210	352,300	Good / Excellent	4.00 - 4.25
Coast Guard Station Harbor Beach	0	n/a	3	53,623	8	15,795	5,850	Fair	4.00 - 4.25
Coast Guard Station Ludington	0	n/a	2	21,779	17	55,809	20,670	Good / Excellent	4.00 - 4.25
Coast Guard Station Manistee	1	30,295	0	n/a	26	96,876	35,880	Good	4.00 - 4.25
Coast Guard Station Marquette	2	27,481	1	5,746	20	209,898	77,740	Fair	<4.00
Coast Guard Station Michigan City	3	508,161	2	17,609	99	1,025,973	379,990	Fair	4.00 - 4.25
Coast Guard Station Port Huron	1	33,882	1	18,536	35	195,858	72,540	Marginal	4.00 - 4.25
Coast Guard Station Portage	0	n/a	5	262,093	30	113,022	41,860	Marginal	4.00 - 4.25
Coast Guard Station Rochester	1	23,178	4	166,357	39	131,978	48,880	Marginal	4.00 - 4.25
Coast Guard Station Sheboygan	2	341	1	17,043	48	365,391	135,330	Marginal	4.25 - 4.50
Coast Guard Station St Ignace	0	n/a	1	12,836	16	162,864	60,320	Fair	<4.00
Coast Guard Station St Joseph	1	35,053	2	23,448	67	651,456	241,280	Good	4.00 - 4.25

Traverse City
Local Industrial Wood Residue



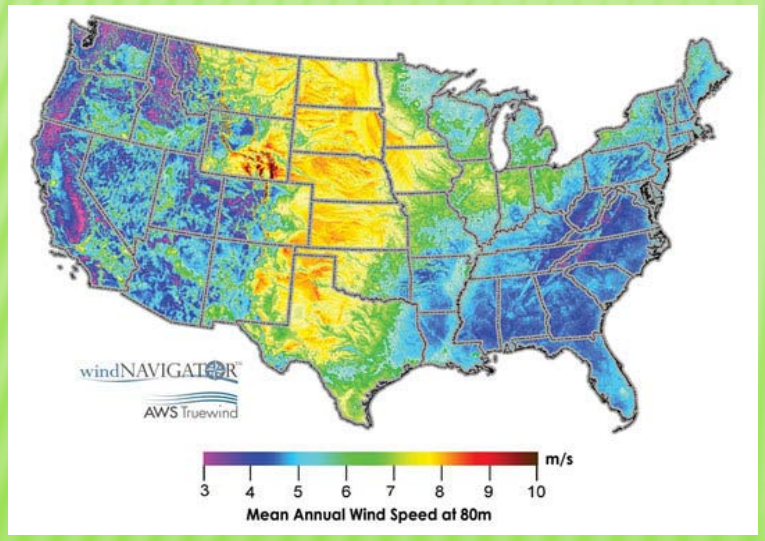
Green Guardian

Effect culture and policy change for a greener Coast Guard

A: Implement sustainable electricity generation

Wind

Identify locations throughout CG with fastest payback
Complete design, initiate permitting, advocate for funding



1/c Nick Herndon, 1/c Jenn Proctor, 1/c Pablo Reguero, 1/c Andy Snyder, 1/c Amy Tow, 2/c Katie Schumacher

Green Guardian

Effect culture and policy change for a greener Coast Guard

A: Implement sustainable electricity generation

Solar

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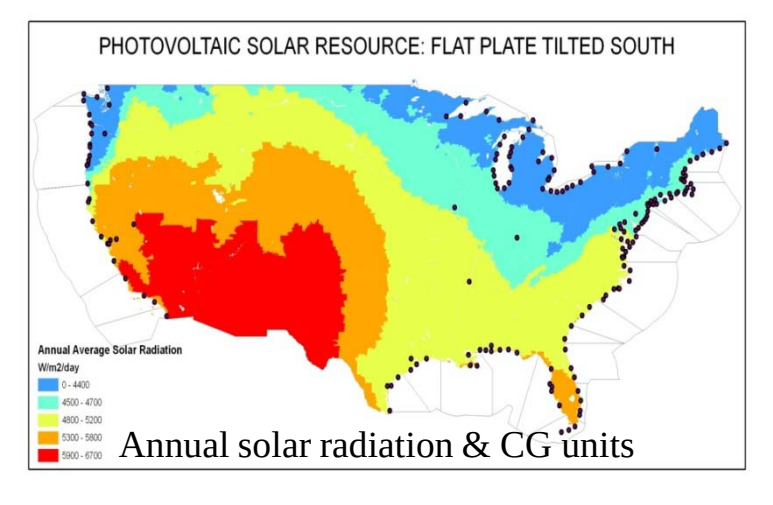


Annual solar radiation & CG units

1/c Nick Herndon, 1/c Jenn Proctor, 1/c Pablo Reguero, 1/c Andy Snyder, 1/c Amy Tow, 2/c Katie Schumacher

Green Guardian

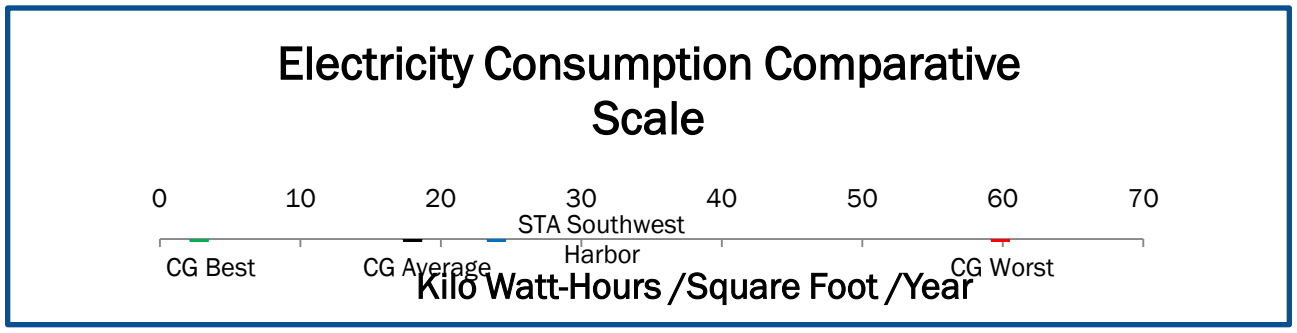
Effect culture and policy change for a greener Coast Guard

B: Save $ and reduce energy use through healthy competition

Energy policy recommendations:

- Send units their energy bills
- Meter cutters separately
- Send comparative energy reports
- Reward reduced energy usage

District	Station	City/State
1	Southwest Harbor	Southwest Harbor, ME



2008 Consumption (kWh)
580760
2009 Consumption (kWh)
614340
Square Footage
25000
Avg. kWh/sqft/Year
23.9

1/c Nick Herndon, 1/c Jenn Proctor, 1/c Pablo Reguero, 1/c Andy Snyder, 1/c Amy Tow, 2/c Katie Schumacher

Green Guardian

Effect culture and policy change for a greener Coast Guard

B: Save $ and reduce energy use through healthy competition

Energy policy issues:

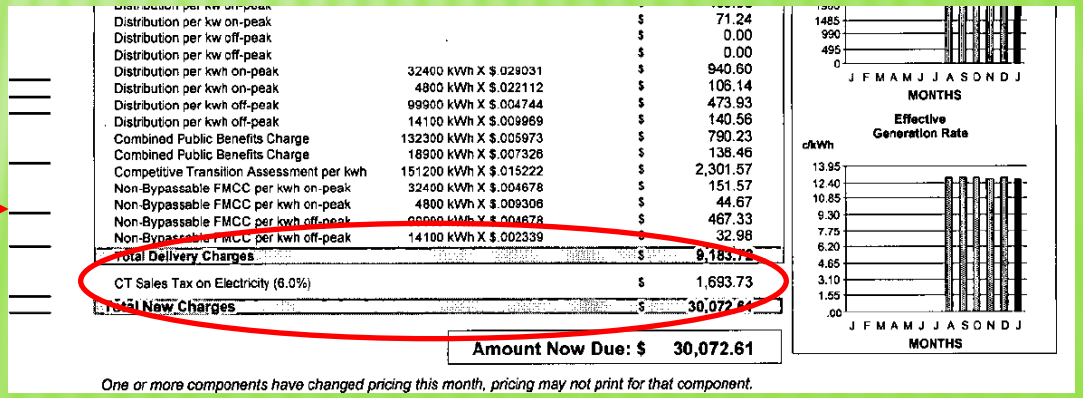
Only about half of energy bills are available

Lower some utility rates simply by asking!

CG pays sales tax on about 5% of energy bills

SEC Long Island Sound Electric bill, FEB09

$18k in sales tax/year



Distribution per kw on-peak		$	71.24
Distribution per kw off-peak		$	0.00
Distribution per kw off-peak		$	0.00
Distribution per kwh on-peak	32400 kWh X $.029031	$	940.60
Distribution per kwh on-peak	4800 kWh X $.022112	$	106.14
Distribution per kwh off-peak	99900 kWh X $.004744	$	473.93
Distribution per kwh off-peak	14100 kWh X $.009969	$	140.56
Combined Public Benefits Charge	132300 kWh X $.005973	$	790.23
Combined Public Benefits Charge	18900 kWh X $.007326	$	138.46
Competitive Transition Assessment per kwh	151200 kWh X $.015222	$	2,301.57
Non-Bypassable FMCC per kwh on-peak	32400 kWh X $.004678	$	151.57
Non-Bypassable FMCC per kwh on-peak	4800 kWh X $.009306	$	44.67
Non-Bypassable FMCC per kwh off-peak	99900 kWh X $.004678	$	467.33
Non-Bypassable FMCC per kwh off-peak	14100 kWh X $.002339	$	32.98
Total Delivery Charges		$	9,183.73
CT Sales Tax on Electricity (6.0%)		$	1,693.73
Total New Charges		$	30,072.61

Amount Now Due: $ 30,072.61

One or more components have changed pricing this month, pricing may not print for that component.

1/c Nick Herndon, 1/c Jenn Proctor, 1/c Pablo Reguero, 1/c Andy Snyder, 1/c Amy Tow, 2/c Katie Schumacher

WIND POWER SITING, INCENTIVES, AND WILDLIFE GUIDELINES IN THE UNITED STATES

Wind Farm – Sherman County, OR

ASSOCIATION of FISH & WILDLIFE AGENCIES

U.S. FISH & WILDLIFE SERVICE

http://www.fishwildlife.org/Science_research/AFWA Wind Power Final Report.PDF

FLORIDA

BACKGROUND

Contact: Julie Rowland, Legislative Affairs Office, Florida Fish & Wildlife Conservation Commission, 850-487-3795, julie.rowland@MyFWC.com, 620 South Meridian Street, Tallahassee, FL 32399-1600

Installed Utility Scale Wind Power: None

INCENTIVES FOR WIND DEVELOPMENT

Renewable Portfolio Standard: Florida does not have an RPS standard in place, but in July, 2007 Florida Governor Charlie Crist signed Executive Order 07-127, entitled "Immediate Actions to Reduce Greenhouse Gas Emissions within Florida". The executive order establishes reduction targets for Greenhouse Gas emissions and requests that the Florida Public Service Commission initiate rulemaking by September 1, 2007 to require that utilities produce at least 20% of their electricity from renewable sources with a strong focus on solar and wind energy.

Incentives for Industrial or "Big Wind" Production:
Florida Renewable Energy Production Tax Credit is a corporate tax credit of $.01/kWh for production of renewable energy (including wind) that is sold to an unrelated buyer.

Incentives for Residential and "Small Wind" Production:
The Renewable Energy Technologies Grants Program provides renewable energy matching grants for demonstration, commercialization, research, and development projects relating to renewable energy technologies. Eligible recipients (must be in-state) include municipalities and county governments; businesses; universities and colleges; utilities; not-for-profit organizations; and other qualified entities; ranking criteria for grant awards includes availability of matching funds, economic development potential, technical feasibility, innovation, long-term production potential, and public visibility, among others.

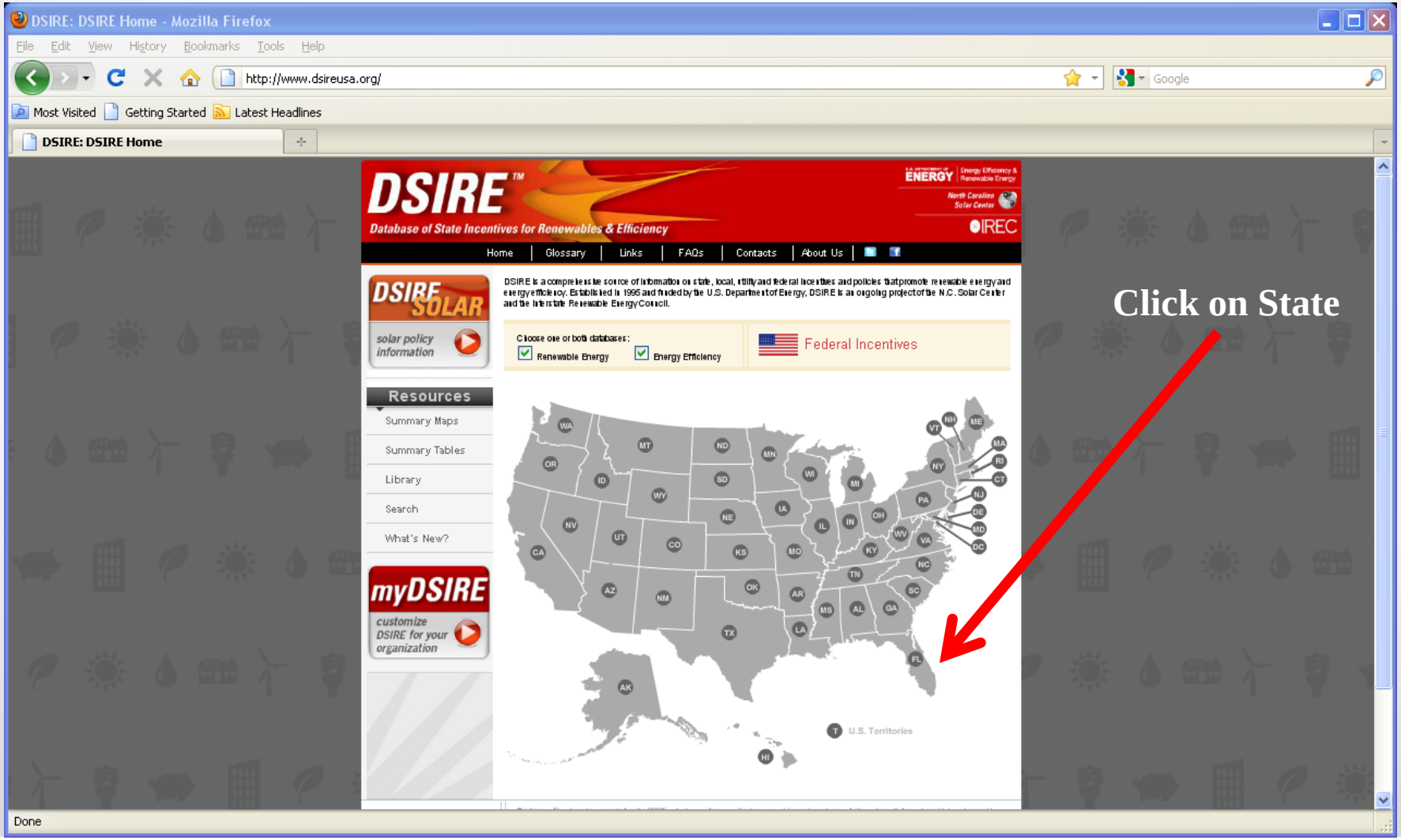
Interconnection and Net Metering Standards:
Current interconnection and net-metering only applies to photovoltaic systems.

ENERGY SITING PROCESS

Power Siting Authority: There is not significant wind power potential at this time, so no current regulations and local governments would most likely have jurisdiction for small scale projects. Florida DEP, Siting Coordination Office has broad authorities for certification of power plants - these are currently defined as traditional as well as solar power plants 75 MW or greater. Should utility scale wind power opportunities increase, this would be the most likely authority.

Reviews incentives as well as any state wildlife regulations for siting wind turbines

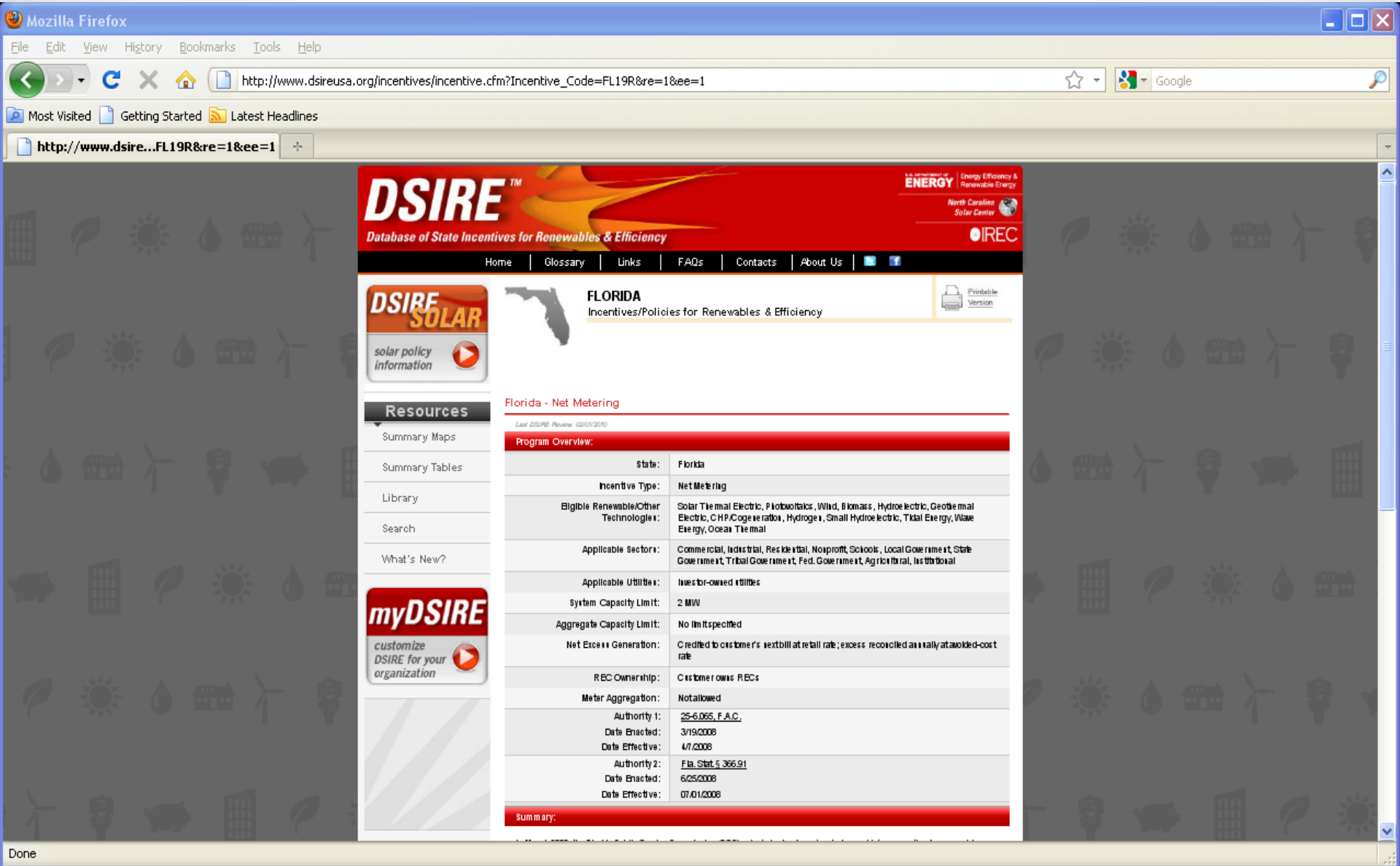
Database of State Incentives for Renewables and Efficiency



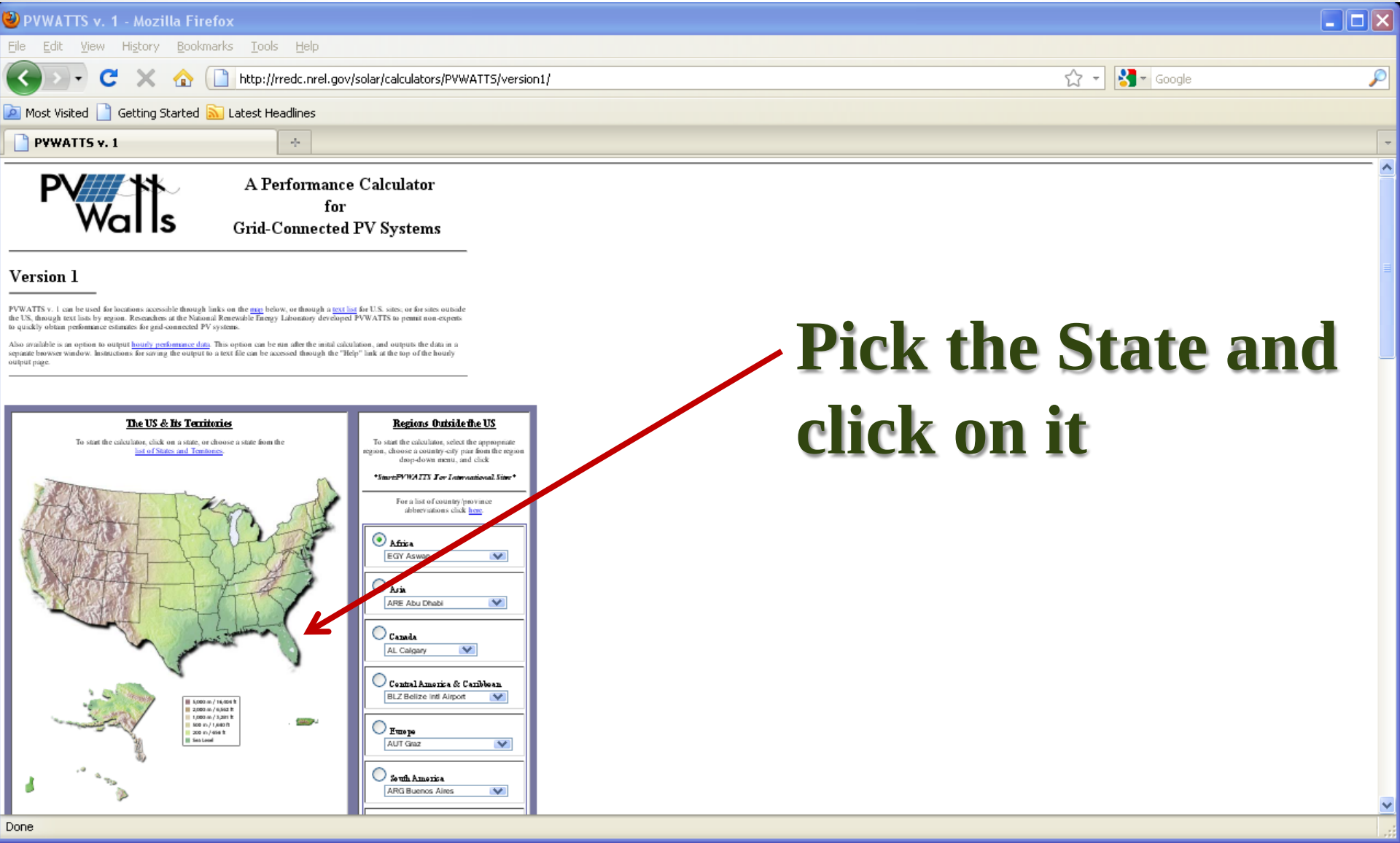
DSIRE.ORG


DSIRE: Incentives/Policies by State: Florida: Incentives/Policies for Renewables & Efficiency - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://www.dsireusa.org/incentives/index.cfm?re=1&ee=1&spv=0&st=0&srp=1&state=FL
Most Visited Getting Started Latest Headlines
DSIRE: Incentives/Policies by State: ...
DSIRE
Database of State Incentives for Renewables & Efficiency
ENERGY
IREC
Home Glossary Links FAQs Contacts About Us
DSIRE SOLAR
solar policy information
FLORIDA
Incentives/Policies for Renewables & Efficiency
Printable Version
See Federal Incentives
See All Summaries
See Residential Incentives Only
Resources
Summary Maps
Summary Tables
Library
Search
What's New?
myDSIRE
customize DSIRE for your organization
Financial Incentives
Green Building Incentive
Miami-Dade County - Green Buildings Expedite Process
Volusia County Green Building Program
Industry Recruitment/Support
Capital Investment Tax Credit for Clean Energy
Miami-Dade County - Targeted Jobs Incentive Fund
Local Loan Program
Sarasota County - Get Energy Smart Retrofit Loan Program
Local Rebate Program
Orange County - OCHEEP!
Sarasota County - Get Energy Smart Retrofit Program
Other Incentive
Lakeland Electric - Solar Water Heating Program
PACE Financing
Local Option - Special Districts
Performance-Based Incentive
Gainesville Regional Utilities - Solar Feed-In Tariff
Orlando Utilities Commission - Pilot Solar Programs
Sales Tax Incentive
Solar Energy Systems Equipment Sales Tax Exemption
Utility Grant Program
City of Tallahassee Utilities - Low-Income Energy Efficiency Grant Programs
Orlando Utilities Commission - Home Energy Efficiency Fix-Up Program
Utility Loan Program
City of Tallahassee Utilities - Efficiency Loans
City of Tallahassee Utilities - Solar Loans
Clay Electric Cooperative, Inc - Energy Conservation Loans
Clay Electric Cooperative, Inc - Solar Thermal Loans
Gainesville Regional Utilities - Low-Interest Energy Efficiency Loan Program
Orlando Utilities Commission - Residential Solar Loan Program
Done

Net Metering Example

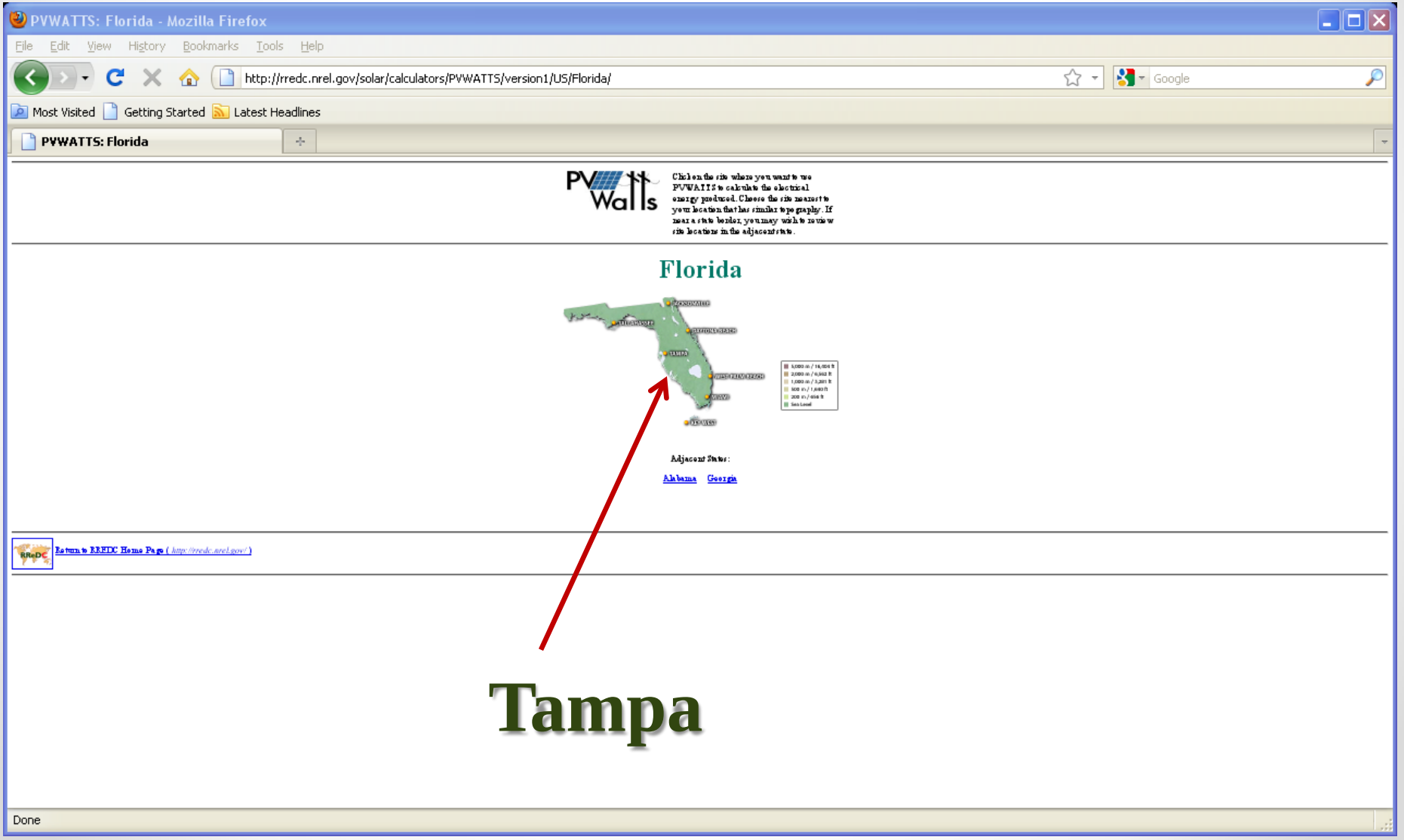


PV Watts (NREL)



Pick the State and click on it

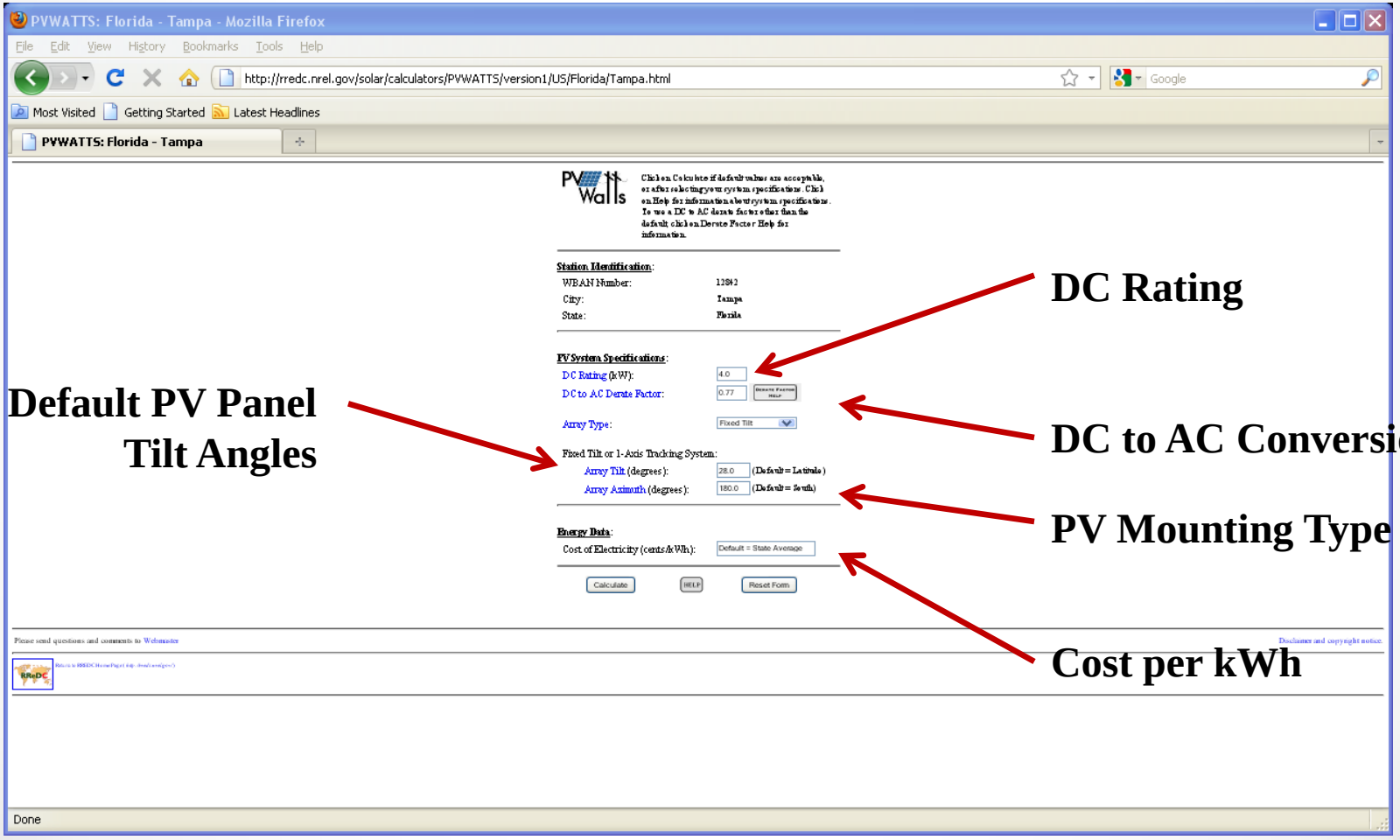
Pick the closest location



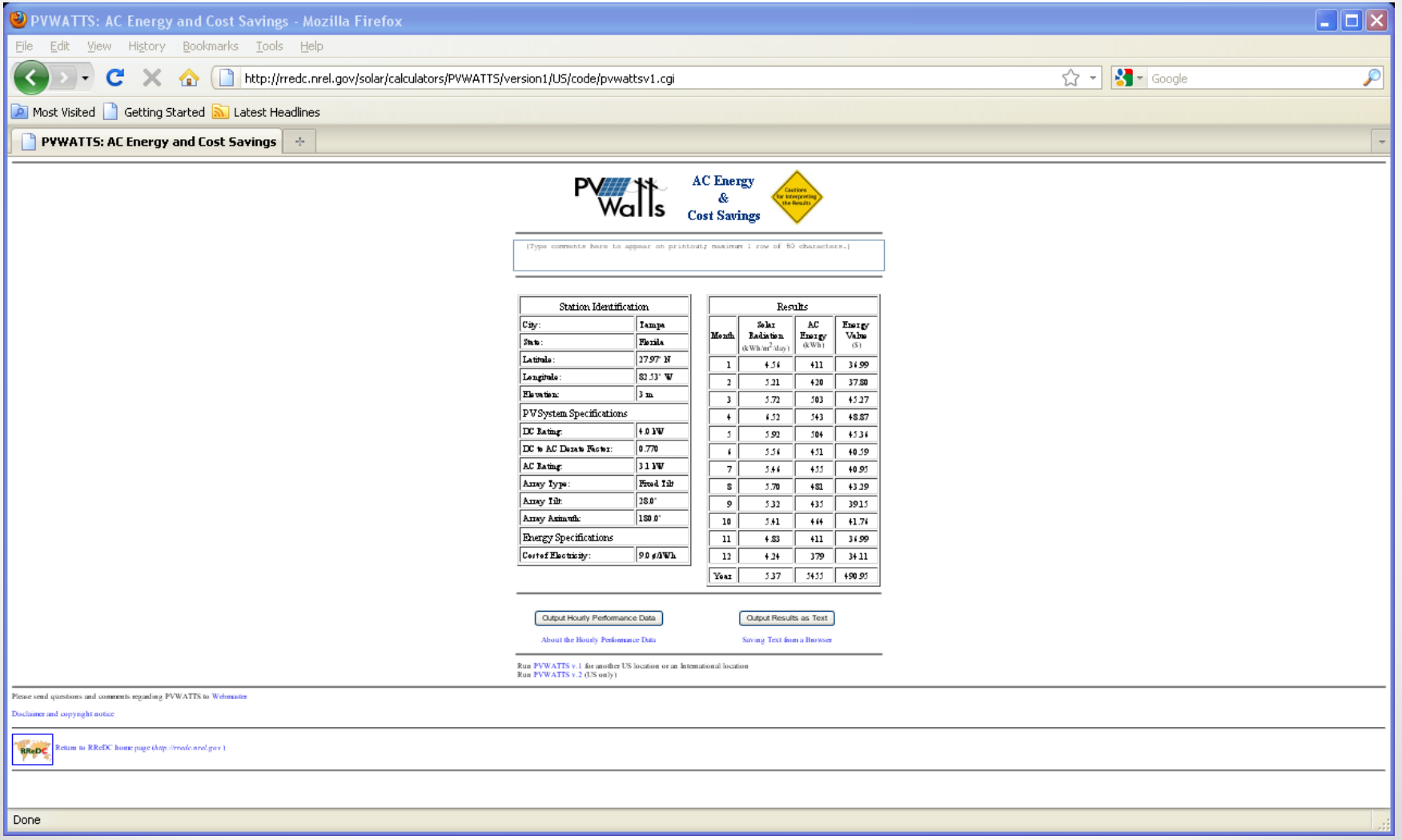
Tampa

PV Mounting

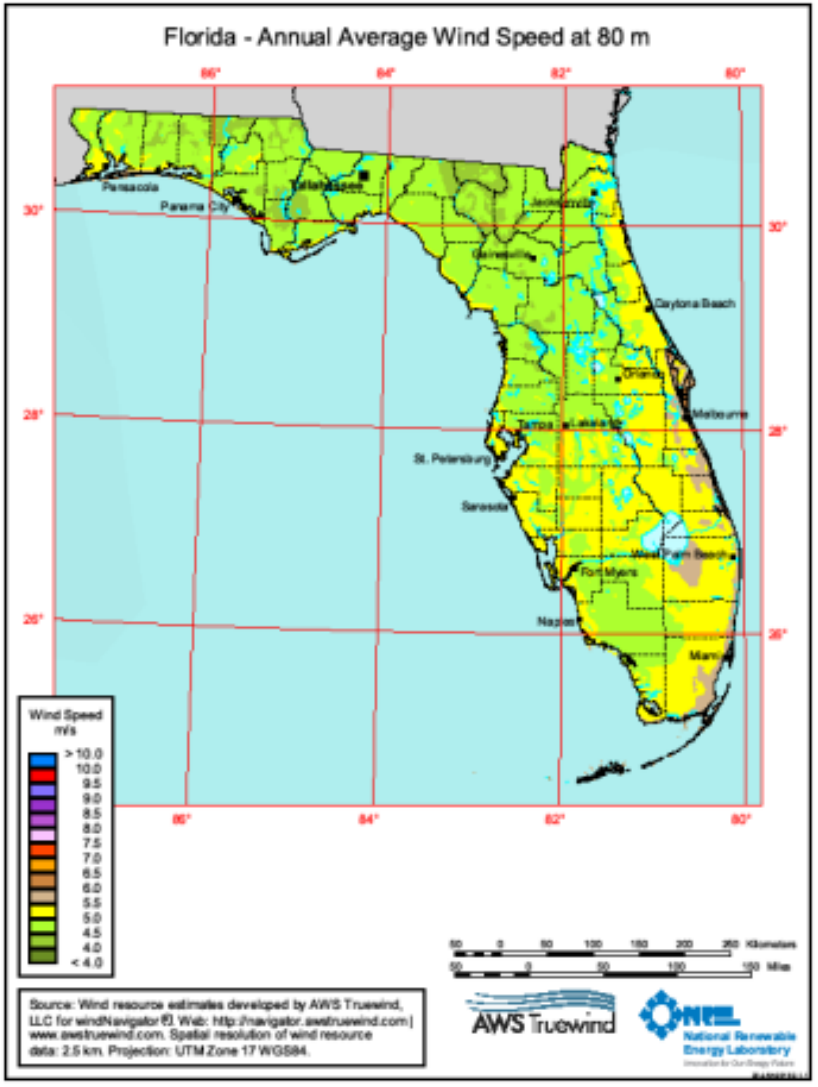
Input the type and size of PV System



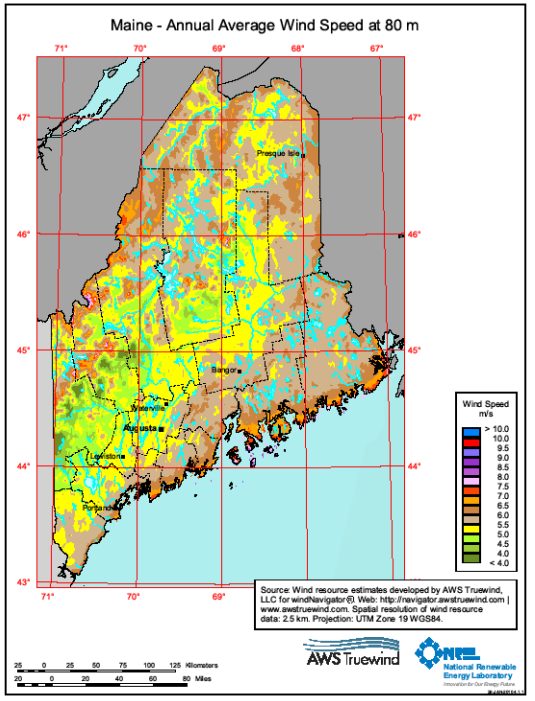
Output- Monthly Estimate of Power and Value



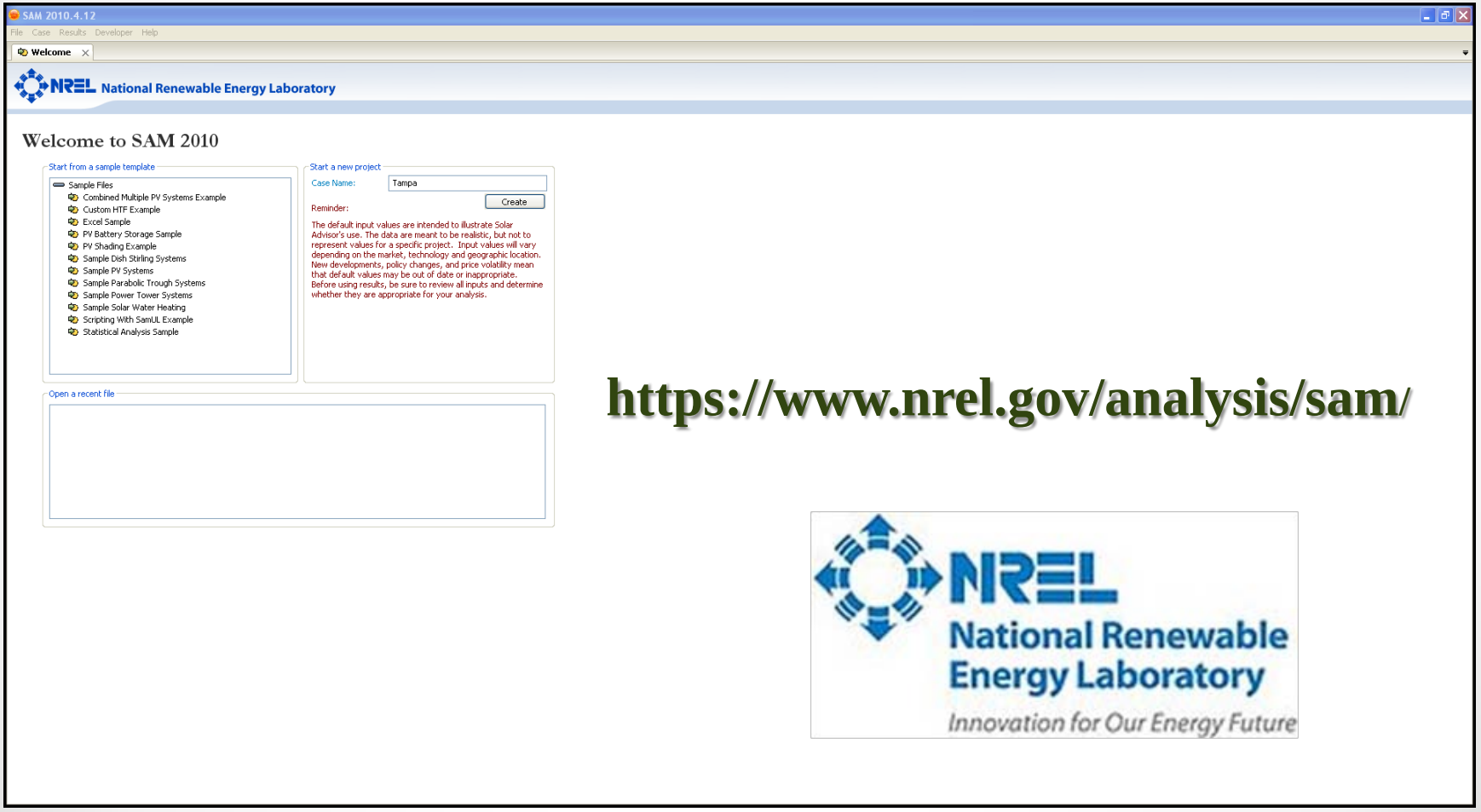
Wind Maps



WindPoweringAmerica.gov



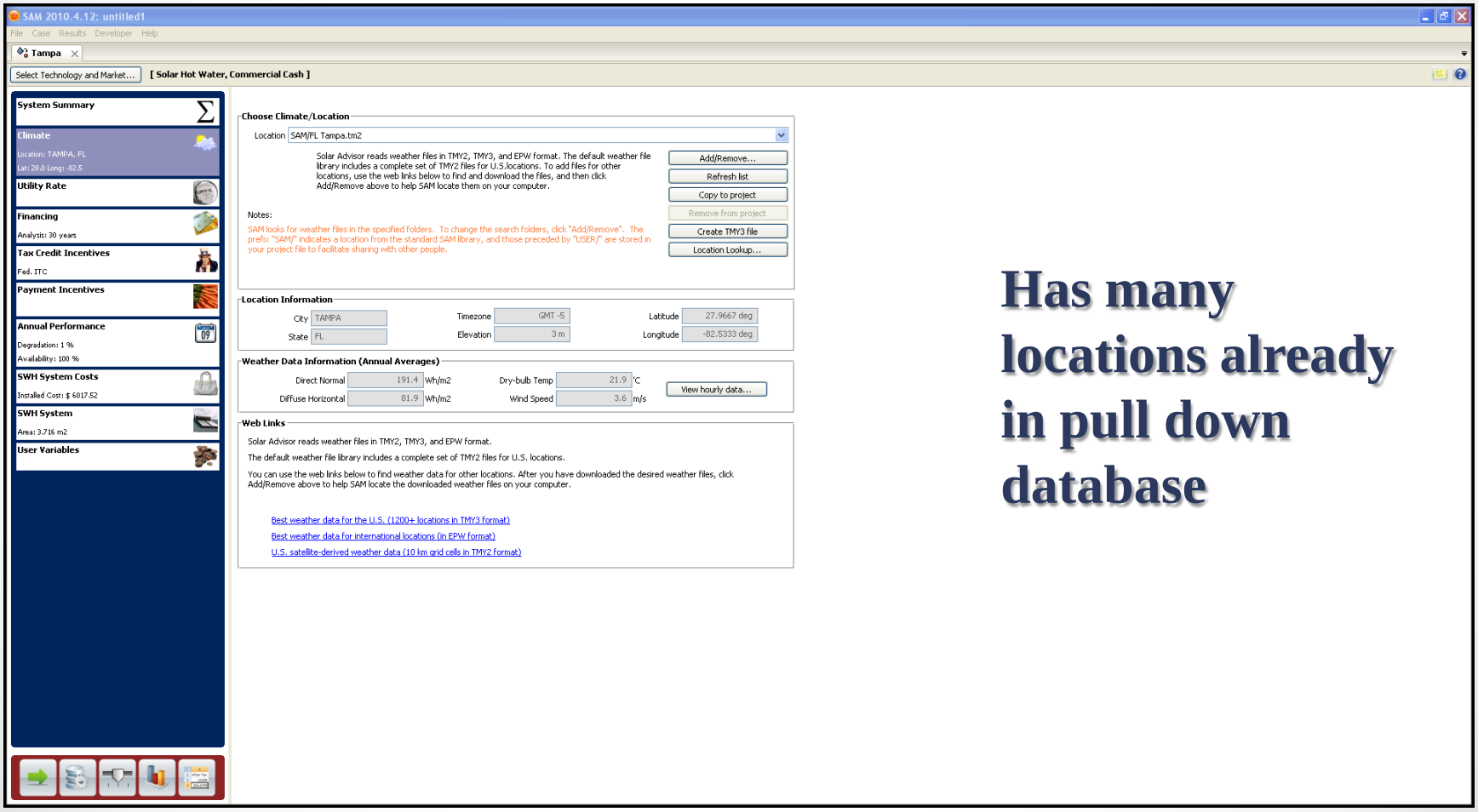
Solar Advisor Model (SAM)



https://www.nrel.gov/analysis/sam/

NREL
National Renewable Energy Laboratory
Innovation for Our Energy Future

SAM Input Parameters



Has many locations already in pull down database

Both PV and Thermal

SAM 2010.4.12: untitled1

File Case Results Developer Help

Tampa

Select Technology and Market... [Solar Hot Water, Commercial Cash]

System Summary

Climate
Location: TAMPA, FL
Lat: 28.0 Long: -82.5

Utility Rate

Financing
Analysis: 30 years

Tax Credit Incentives
Fed. ITC

Payment Incentives

Annual Performance
Degradation: 1 %
Availability: 100 %

SWH System Costs
Installed Cost: $ 6017.52

SWH System
Area: 3.716 m2

User Variables

Direct Capital Costs

Collector Cost	220.00	$/m2	$ 817.52
Storage Cost	1,500.00	$/unit	$ 1,500.00
Balance of System			$ 1,500.00
Installation Cost			$ 2,200.00
Contingency		0 %	$ 0.00
Total Direct Cost			$ 6,017.52

Indirect Capital Costs

	% of Direct Cost	Non-Fixed Cost	Fixed Cost	Total
Engineer,Procure,Construct	0 %	$ 0.00	$ 0.00	$ 0.00
Project,Land,Miscellaneous	0 %	$ 0.00	$ 0.00	$ 0.00

Sales Tax of 0 % applies to 100 % of Direct Cost $ 0.00

Total Indirect Cost $ 0.00

Total Installed Costs

Total Installed Cost	$ 6,017.52
Total Installed Cost per Capacity ($/Wt)	$ 2.55

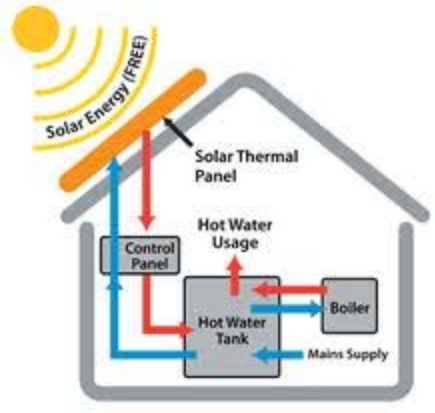
Operation and Maintenance Costs

	First Year Cost		Escalation Rate (above inflation)
Fixed Annual Cost	0.00	$/yr	0 %
Fixed Cost by Capacity	50.00	$/kW-yr	0 %
Variable Cost by Generation	0.00	$/MWh	0 %
Fossil Fuel Cost	0.00	$/MMBTU	0 %

Notes

1) Escalation rates do not apply to O&M annual schedules, only first year values.

2) Fossil fuel cost is not applicable to PV or Dish Stirling systems. Set to zero for these systems.



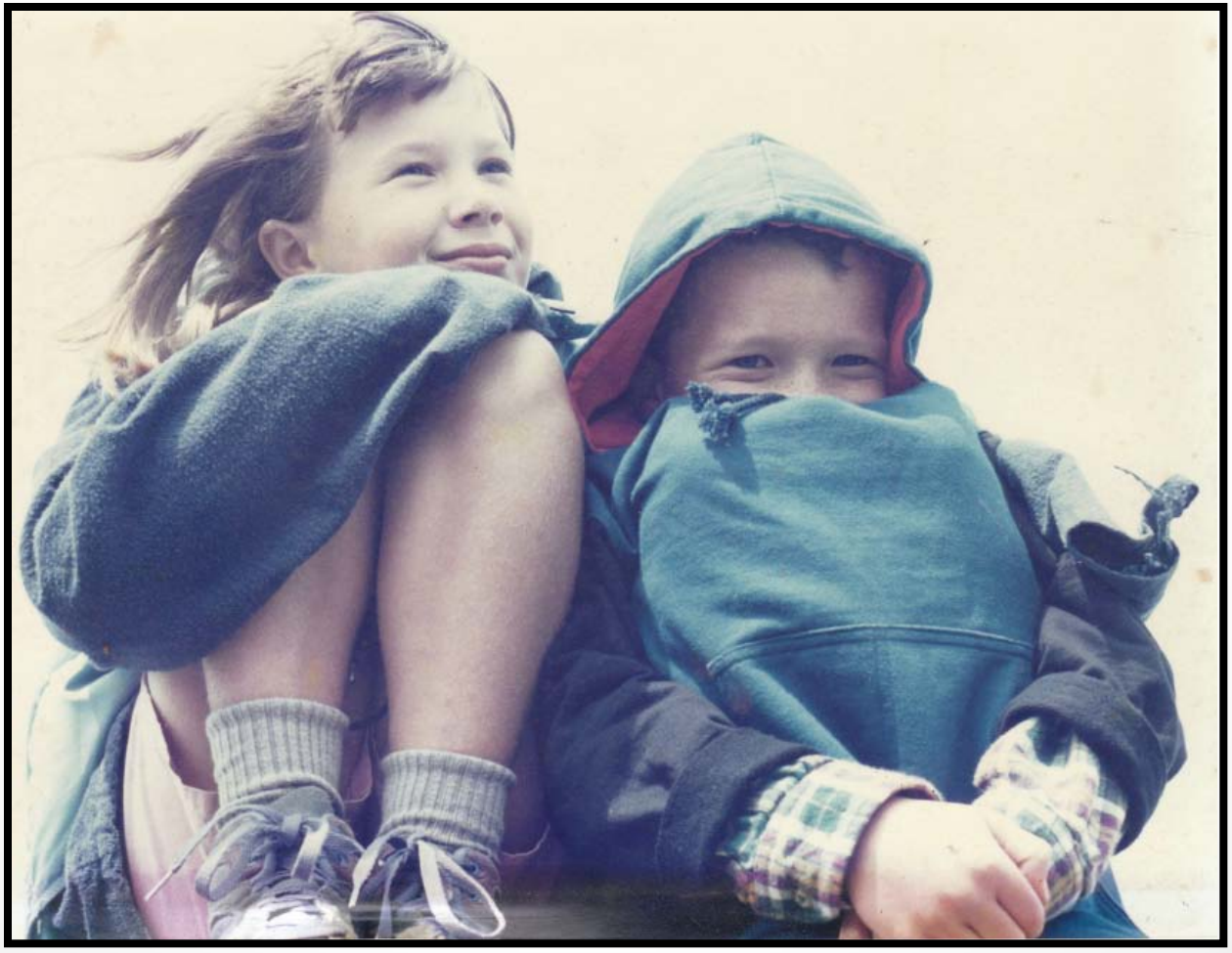
May you all have fair winds and a following sea

Thanks!

UNITED STATES COAST GUARD INNOVATION EXPO
2010
TAMPA, FLORIDA

Daniel.Ingold@WestonSolutions.com

Dan@Powersmith.US



Innovative Approaches to Sustainable Asset Management

Presented to
the 2010 U.S. Coast Guard
Innovation Expo

Andrea Hart
Sustainable Operations
Weston Solutions, Inc.

4 November, 2010

Securing the Homeland: Asset Management Strategies are Critical

Sustainability = Resilience

- Ability to withstand
- Ability to adapt
- Ability to recover

- Ability to respond
- Ability to defend

What are the Drivers?

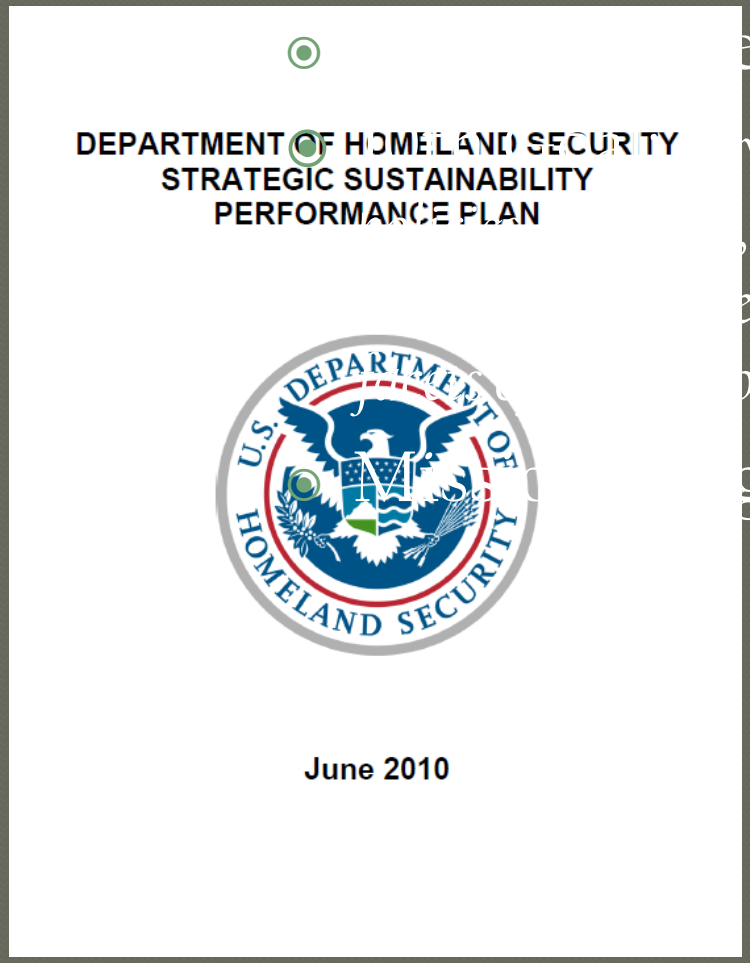
TRIPLE-BOTTOM LINE *PLUS*

- Environmental
  - Minimize inputs and outputs
  - Ensure energy security (= national security)
- Economic
  - Reduce operating costs
  - Increase operating budget savings
  - Utilize savings on other projects
- Social
  - Entice new generations into service
  - Increase productivity

The Plus?.. *EO 13514*

- Federal Leadership in Environmental, Energy and Economic Performance
  - builds upon earlier EO guidance
  - strengthens requirements for managing energy, water, recycling
  - requires development of sustainability plan for assets

DHS SSPP



- e Goals
- *velop* **innovative**
  , projects, procedures
  e sustainability into all
  on
- gration

Innovation in Asset Management

- Optimize assets not to just make them more efficient – sustainable -- but to ensure longer term mission critical value is gained
- Prioritize assets for upgrade, retrofit – invest…or divest – based on value of that asset to achieving your mission
- Continuously think outside-of-the-box in applying new techniques, technologies

Innovation in action!

Nike

- Green supply chain
- Carbon neutrality by 2015
- Reduced energy intensity through lighting, HVAC retrofits
- New teleconference system to cut travel
- Belgium, Netherlands HQs uses 100% renewable energy

Source: Newsweek, 2010 Nov

Innovation in action!

Yahoo

- Promotes green lifestyle tips to 600M users worldwide
- Improved efficiency of data centers
  - Improved energy efficiency by using renewables (hydroelectric)
  - Relocated centers to cooler climates, reducing AC costs
  - Lockport, NY, facility monitors all Yahoo infrastructure--consumes 40% less energy, uses 95% less water than conventional centers
  - Water saved = drinking water for 200K/yr

How to Make Innovation Happen

Creative Financing Models

Power of PPPs!

- Public-Private Partnerships
  - Significant underfunded, aged asset base combined with private equity investment, management expertise
    - BRAC is a leading program
    - Fort Sam Houston historic renovation
  - Innovative models integrate sustainability
    - City of Newark Solar PPA
    - USCG Kodiak Island, AK Performance Contract

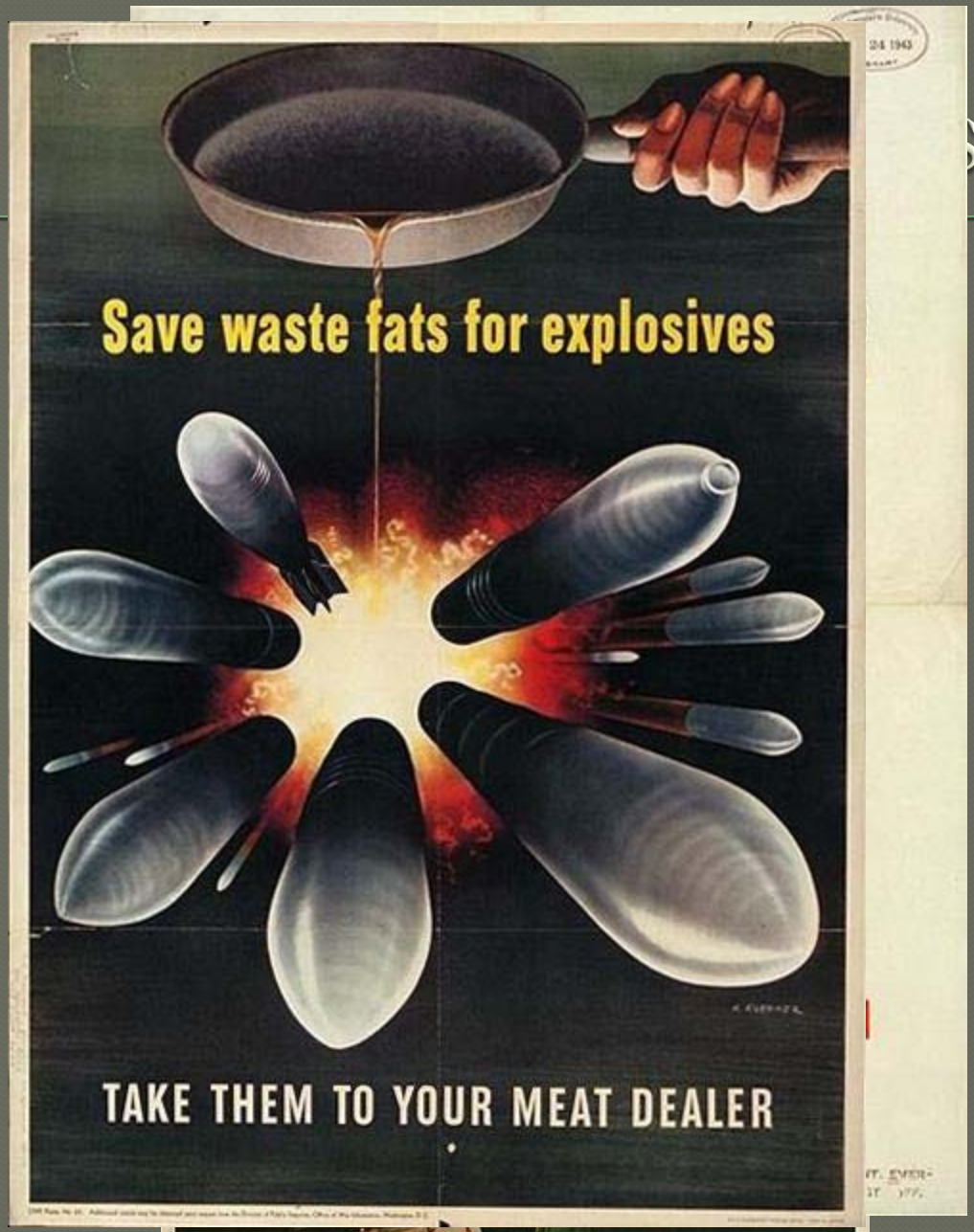
Important to understand what the contract mechanisms are for PPPs!

What is Innovation and How Can I Get One?

- Keys to Building a Culture of Innovation*
  - Coordinate top-down and grassroots efforts
  - Define the challenge clearly
  - Remove organizational silos
  - Recognize successful innovators among your employees
  - Don't treat innovation as an event
  - Give people free, unstructured time to be innovative

Source: *Federal Computer Week, 2010*

sn't new


Save waste fats for explosives
TAKE THEM TO YOUR MEAT DEALER
TRUCKS AND TIRES MUST LAST TILL VICTORY

Call to Action!

- Everyone has a role and responsibility!
- Leadership is imperative to guide personal passions!
- Identify opportunities to maximize triple-bottom line benefits
  - Cleaner environment
  - Greater economic efficiency
  - Happier people

Sustainability isn't an option

U.S. Coast Guard Innovation Expo

Thank you!

Questions?

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www.westonsolutions.com