



Understanding the Importance of National and State Policy & Economic Feasibility

Supply, Demand, Transmission



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Adam Zellner – President of Greener by Design LLC.

- Adam Zellner is the current President of Greener by Design LLC, a global environmental and energy management company headquartered in New Brunswick New Jersey and a Adjunct Professor at Rutgers University.
- Mr. Zellner is the former Policy Director for the State of New Jersey. In this role, Adam oversaw policy development and co-authored the State's Energy Master Plan. Prior to joining the Governor's staff, Adam served in several high profile policy roles including as the Deputy Commissioner for the New Jersey Department of Environmental Protection (NJDEP).
- In addition, Mr. Zellner was the inaugural Executive Director of the New Jersey Highlands Water Council and is the former Executive Director of the New Jersey Office of Land Use Planning. Mr. Zellner also served as the policy director and chief of staff for several members of Congress and the State Legislature.



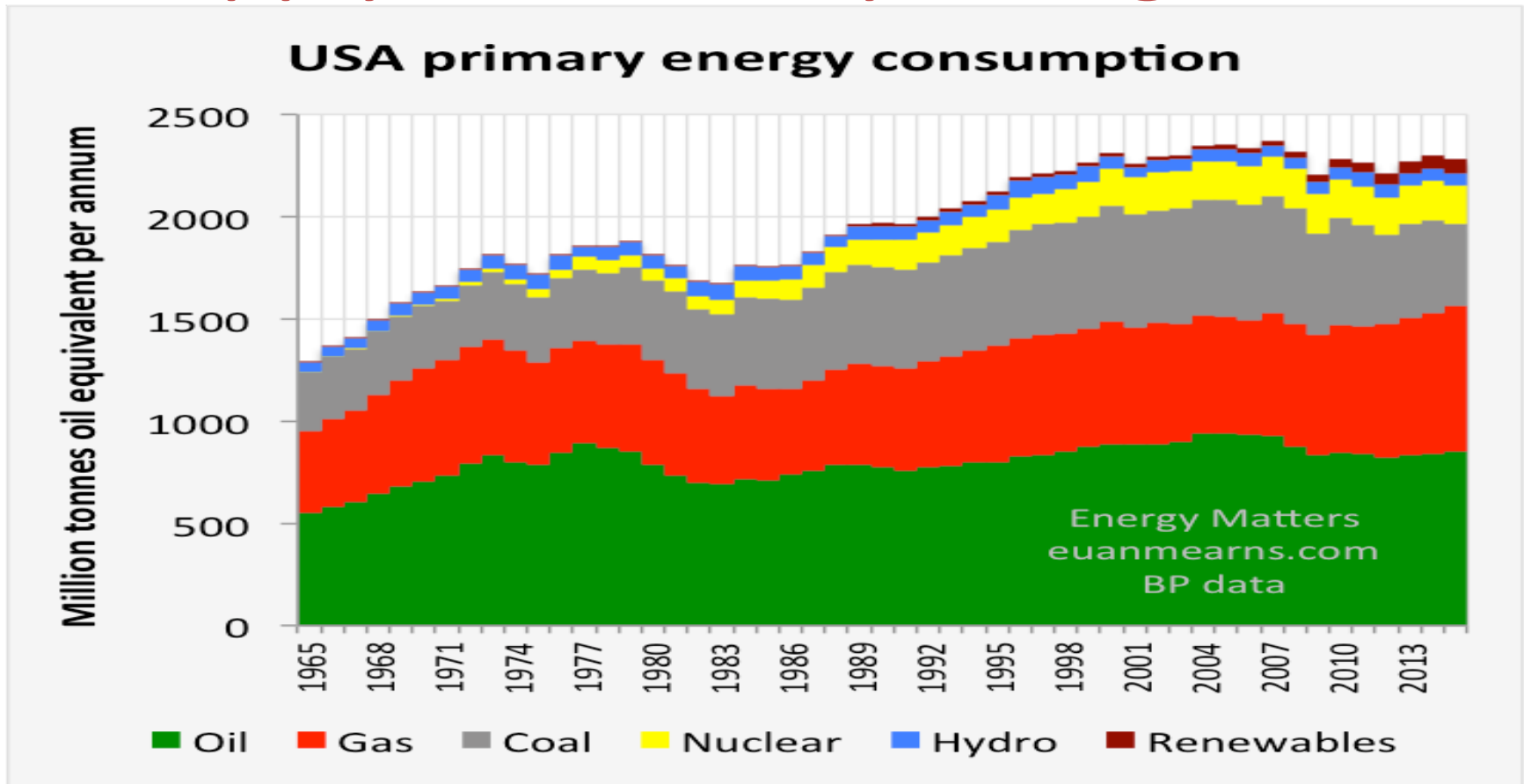
Energy Master Plan

Do you know?





Supply – Generally Deregulated





What's being done to change supply?

State Policies Include:

- * Renewable Portfolio Standards – Percentage of generation required
- * REC and Feed In Tariffs – Revenue for using Green Energy
- * Sales Tax Rebates - Rebate
- * Reverse Metering – Spin the meter backwards

Federal Policies Include:

- * ITC
- * RIM

Why are they doing it?

- Reduced peak
- New generation
- Air Quality or Carbon Reduction (RGGI)
- Energy Choice
- Jobs and Economic Development



What is Net Metering:

HOW NET METERING WORKS



The solar panels receive energy from the sun and, with an inverter, make it available for use at home.



The energy is used in your home.



A bi-directional meter measures the energy purchased from Mississippi Power and the excess energy created at your home.



Excess energy is sent to the grid and bought by the utility.





What's being done?

Demand





What's being done?

Transmission





What does it look like?

Comprehensive

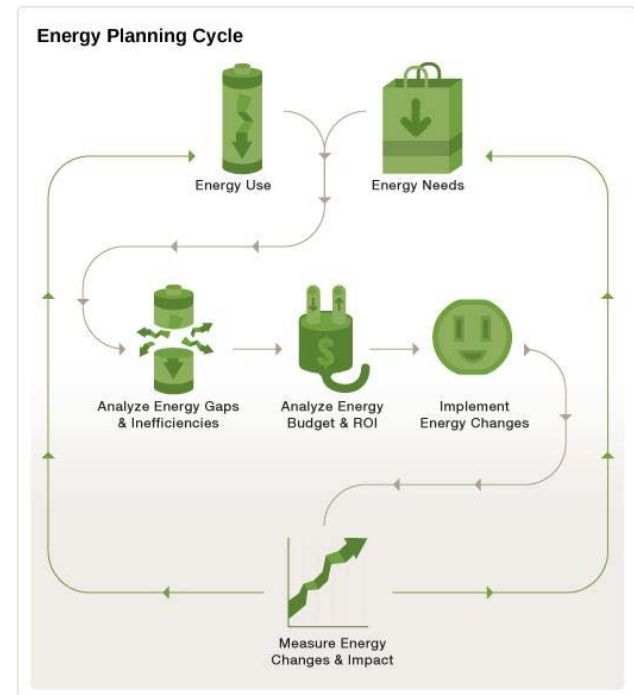
Supply

Energy

Demand

Planning

Transmission





Greener by Design



Project Size (watts)	200,000	Loan Rate	5.50%
Project Cost (\$/watt)	\$ 2.40	Loan Term	15
Project Cost USD	\$ 555,000	Soft Costs	\$ 75,000

200 kW Ballasted Roof-Mount Conceptual Econometric Analysis

Year	ITC	Annual off-take	Price to compare	Energy cost savings	SREC Value Projection	SREC Revenue	Debt Service	O & M	Simple Cash flow
1	\$ 132,000	250,000	\$ 0.14560	\$ 36,400	\$ 210	\$ 52,500	\$ (55,292)		\$ 165,818
2		248,750	\$ 0.14880	\$ 37,015	\$ 205	\$ 50,994	\$ (55,292)	\$ (7,000)	\$ 25,716
3		247,506	\$ 0.15208	\$ 37,640	\$ 205	\$ 50,739	\$ (55,292)	\$ (7,280)	\$ 25,807
4		246,269	\$ 0.15542	\$ 38,276	\$ 205	\$ 50,485	\$ (55,292)	\$ (7,571)	\$ 25,897
5		245,037	\$ 0.15884	\$ 38,922	\$ 205	\$ 50,233	\$ (55,292)	\$ (7,874)	\$ 25,989
6		243,812	\$ 0.16234	\$ 39,580	\$ 210	\$ 51,201	\$ (55,292)	\$ (8,189)	\$ 27,299
7		242,593	\$ 0.16591	\$ 40,248	\$ 200	\$ 48,519	\$ (55,292)	\$ (8,517)	\$ 24,958
8		241,380	\$ 0.16956	\$ 40,928	\$ 200	\$ 48,276	\$ (55,292)	\$ (8,857)	\$ 25,054
9		240,173	\$ 0.17329	\$ 41,619	\$ 195	\$ 46,834	\$ (55,292)	\$ (9,212)	\$ 23,949
10		238,972	\$ 0.17710	\$ 42,322	\$ 190	\$ 45,405	\$ (55,292)	\$ (9,212)	\$ 23,223
11		237,778	\$ 0.18100	\$ 43,037	\$ 190	\$ 45,178	\$ (55,292)	\$ (9,580)	\$ 23,342
12		236,589	\$ 0.18498	\$ 43,764	\$ 180	\$ 42,586	\$ (55,292)	\$ (9,963)	\$ 21,094
13		235,406	\$ 0.18905	\$ 44,503	\$ 180	\$ 42,373	\$ (55,292)	\$ (10,362)	\$ 21,222
14		234,229	\$ 0.19321	\$ 45,255	\$ 180	\$ 42,161	\$ (55,292)	\$ (10,776)	\$ 21,347
15		233,058	\$ 0.19746	\$ 46,019	\$ 180	\$ 41,950	\$ (55,292)	\$ (10,776)	\$ 21,901
16		231,892	\$ 0.20180	\$ 46,796				\$ (11,207)	\$ 35,589
17		230,733	\$ 0.20624	\$ 47,587				\$ (11,656)	\$ 35,931
18		229,579	\$ 0.21078	\$ 48,390				\$ (12,122)	\$ 36,269
19		228,431	\$ 0.21542	\$ 49,208				\$ (12,607)	\$ 36,601
20		227,289	\$ 0.22015	\$ 50,039				\$ (13,111)	\$ 36,928
21		226,153	\$ 0.22500	\$ 50,884				\$ (13,635)	\$ 37,249
22		225,022	\$ 0.22995	\$ 51,743				\$ (14,181)	\$ 37,563
23		223,897	\$ 0.23501	\$ 52,617				\$ (14,748)	\$ 37,869
24		222,777	\$ 0.24018	\$ 53,506				\$ (15,338)	\$ 38,168
25		221,663	\$ 0.24546	\$ 54,410				\$ (15,951)	\$ 38,458
26		220,555	\$ 0.25086	\$ 55,329				\$ (16,589)	\$ 38,739
27		219,452	\$ 0.25638	\$ 56,263				\$ (17,253)	\$ 39,010
28		218,355	\$ 0.26202	\$ 57,214				\$ (17,943)	\$ 39,270
29		217,263	\$ 0.26779	\$ 58,180				\$ (18,661)	\$ 39,519
30		216,177	\$ 0.27368	\$ 59,163				\$ (19,407)	\$ 39,755

15-year \$ (125,168) \$ 502,618

30-year \$ (349,577) \$ 1,069,537



What's next?

Community
Solar

Code
Changes



Building
Changes

CFD





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Sources:

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Solar Panels. Digital image. Google Images. N.p., n.d. Web. 9 June 2017.