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ATTACHMENT E

AES Energy Storage

Addressing Barriers to Entry in Electric Energy Storage: A PPA Story

California PUC Electric Energy Storage Workshop

June 2011

www.aesenergystorage.com

Safe Harbor Disclosure

AES Energy Storage

Certain statements in the following presentation regarding AES's business operations may constitute "forward-looking statements." Such forward-looking statements include, but are not limited to, those related to future earnings growth and financial and operating performance. Forward-looking statements are not intended to be a guarantee of future results, but instead constitute AES's current expectations based on reasonable assumptions. Forecasted financial information is based on certain material assumptions. These assumptions include, but are not limited to accurate projections of future interest rates, commodity prices and foreign currency pricing, continued normal or better levels of operating performance and electricity demand at our distribution companies and operational performance at our generation businesses consistent with historical levels, as well as achievements of planned productivity improvements and incremental growth from investments at investment levels and rates of return consistent with prior experience. For additional assumptions see the Appendix to this presentation. Actual results could differ materially from those projected in our forward-looking statements due to risks, uncertainties and other factors. Important factors that could affect actual results are discussed in AES's filings with the Securities and Exchange Commission including but not limited to the risks discussed under Item 1A "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2008, as well as our other SEC filings. AES undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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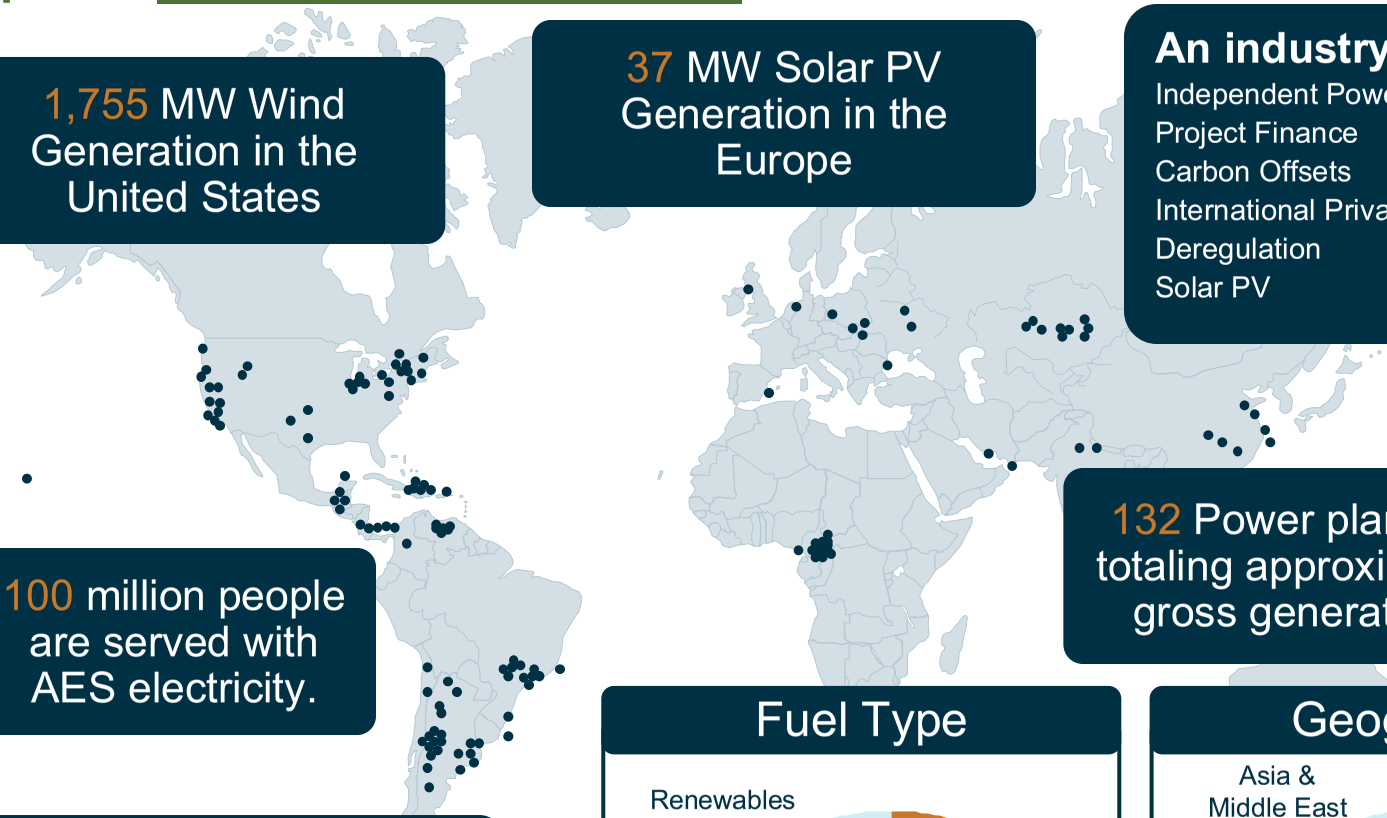
AES Energy Storage is a division of AES Corp, a diversified global power company. Our business is to develop, own and operate grid-scale energy storage.

AES Energy Storage

1,755 MW Wind Generation in the United States

37 MW Solar PV Generation in the Europe

An industry leader in…
- Independent Power Production
- Project Finance
- Carbon Offsets
- International Privatizations
- Deregulation
- Solar PV

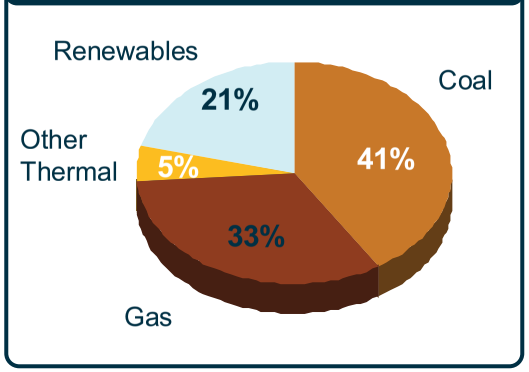


132 Power plants worldwide totaling approximately 40 GW gross generation capacity

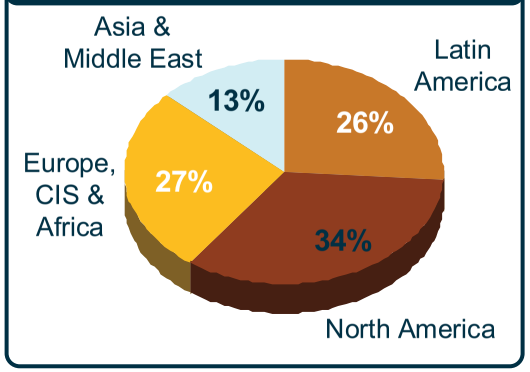
100 million people are served with AES electricity.

14 Utilities worldwide, serving 11 million customers, with sales of 77,000 GWh

Fuel Type



Geography



Note: As of October 2010

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News Release Date: August 20, 2010

LIPA Long Island Power Authority

LIPA Issues Request for Proposals For New and/or Repowered Power Resources

LIPA is Seeking Up to 1000 MW to Modernize its Power Supply Resources to Reliably Serve its Increasing Customer Electricity Demands

Uniondale, NY - The Long Island Power Authority (LIPA) released a Request for Proposals (RFP) today that seeks to purchase from experienced and qualified entities up to 1,000 megawatts (MW) of electric capacity, energy, and related services from new and/or repowered generation for a term of 20 years under power purchase agreement(s).

LIPA's 2010-2020 Electric Resource Plan released in February 2010 indicates that Long Island will need new resources in the 2016-2020 time-frame to meet electric reliability needs. To meet these needs and to modernize the power generation fleet under contract to LIPA, it is seeking up to 1,000 MW of Long Island-based power generation and/or off-Island power generation delivered by a new transmission cable, with such facilities to be in service as early as Spring of 2016.

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May 18, 2011, 12:44 PM

The New York Times

Can Batteries Replace Power Generators?

By MATTHEW L. WALD

AES Energy Storage

A plant in Johnson City, N.Y., where batteries are used to store energy. AES Energy Storage proposes to furnish a bigger battery installation for the Long Island Power Authority.

Business

When the Long Island Power Authority said last summer that it was going to need new power capacity in the next few years, most people assumed that meant new generating stations or new transmission cables. But of the 16 companies that submitted proposals, one, AES Energy Storage, took an entirely different tack: it proposed batteries.

AES Energy Storage

- ✓ Value
- ✓ Precedent
- ✓ Business Model
- ✓ Credentials

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Value: 400 MW/1600MWh Proposal for Long Island: A battery based peaking capacity solution is more economic than traditional technology.

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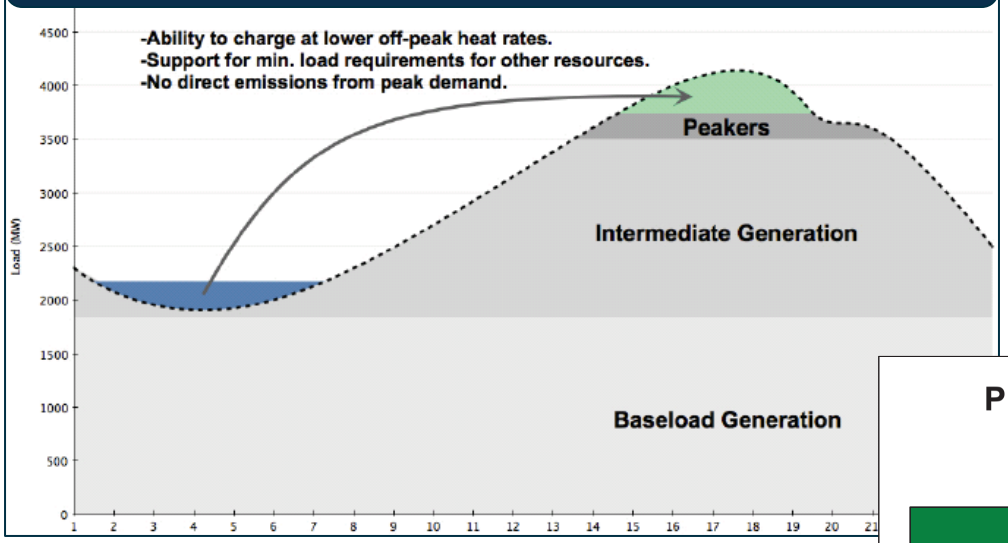
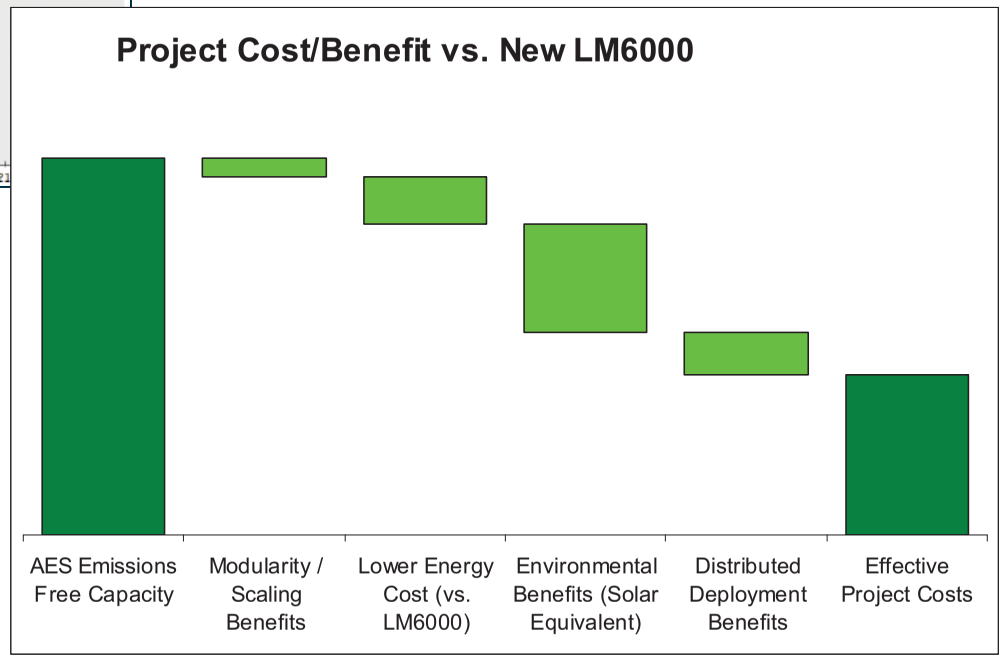
Flexible Emissions-Free Capacity





- ✓ Energy Storage can compete with traditional peaking capacity solutions.
- ✓ Several distinct and unique benefits create compelling solution.
- ✓ **Utilities and their regulators should anticipate the benefits of storage in their procurement processes.**

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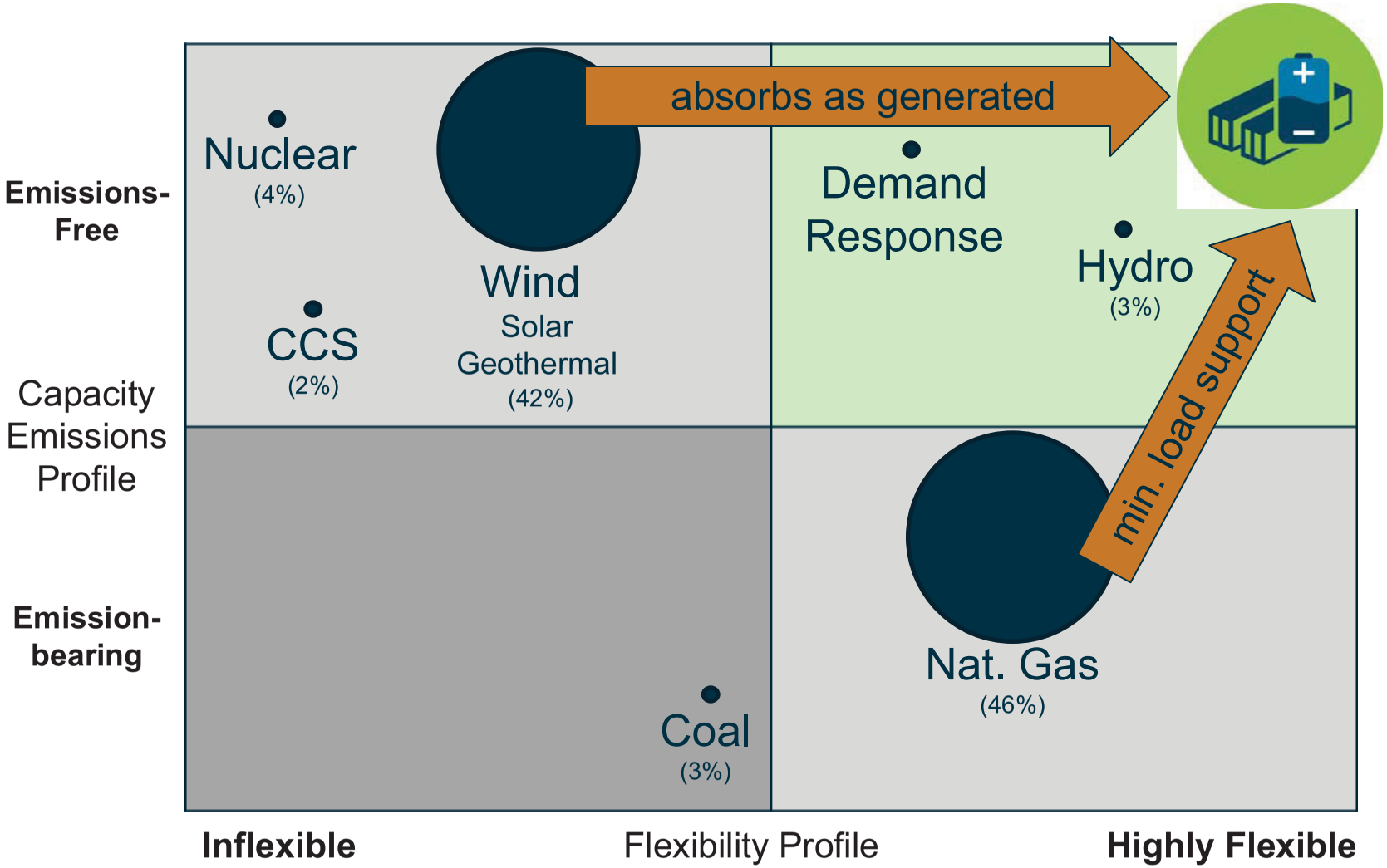
Value: Energy storage meets two pressing goals of electric power policy simultaneously: reduce emissions and ensure reliability.



Size represents share of planned capacity additions in the U.S. 2010-2025, Source: EER

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Value: Peak to off-peak swing is 40% of total capacity in NYISO on peak days; average capacity factor of CCGT in U.S. is 43%.

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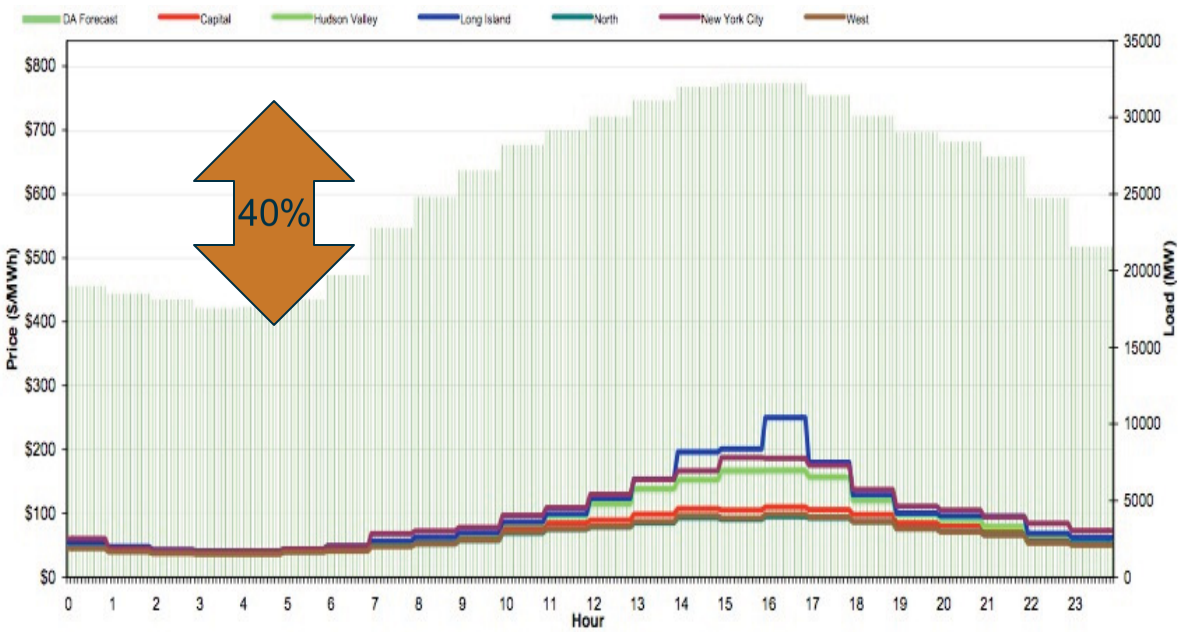
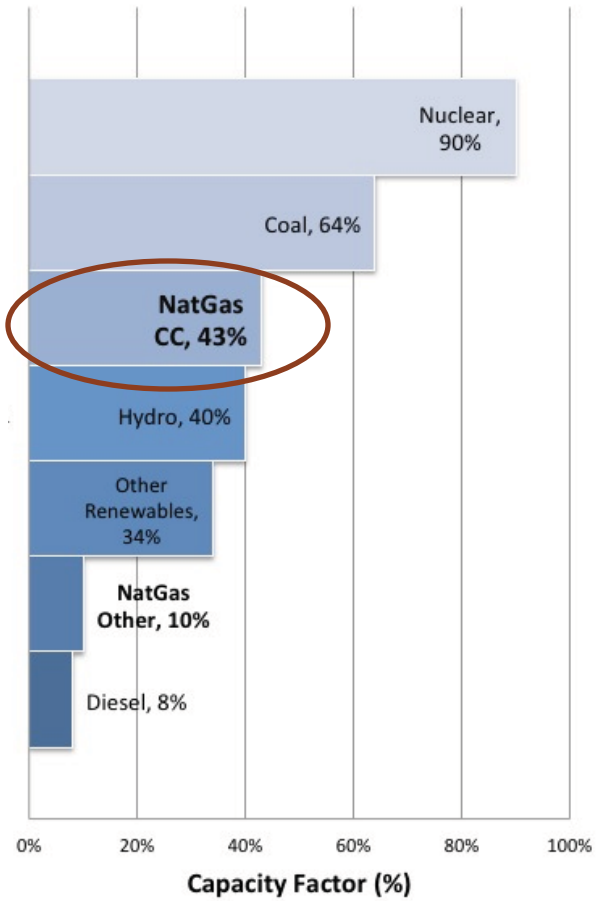
NYISO Load Curve, July 6th, 2010



Average Utilization, 2009
Source: EIA



Storage means we will use our growing CCGT fleet to its fullest.

Source: FERC, EIA

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Precedent: AES Energy Storage has 20 MW in operation serving two customer segments with another 64 MW in construction across 3 sites.

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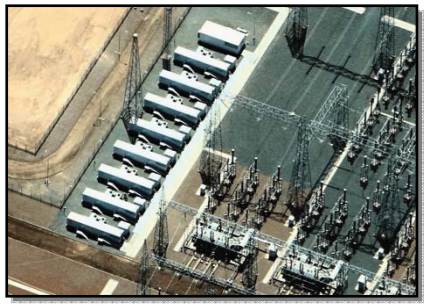
Capacity Release for Generators



12 MW
Los Andes, Chile
(in operation)

COD:	Dec-2009
Size:	12 MW
Revenue Model:	94 GWh energy sales/year
Commercial Availability.:	100%

Reserve Capacity for Utilities and LSEs

8/20 MW
Johnson City, NY
(in operation/construction)

COD:	Dec-2010/1H-2011
Size:	8/20 MW (DOE LG)
Revenue Model:	Reg. Capacity Sales (NYISO)
Commercial Availability.:	>95%

20 MW Angamos, Chile
(in construction)

Capacity Release for Generators

98 MW Wind/32 MW Storage Project, WV-US
(in construction)

Reserve Capacity for Utilities and LSEs

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Business Model: Similar to the wind industry, independent power producers (IPP's) are an appropriate point of entry for grid-scale storage.

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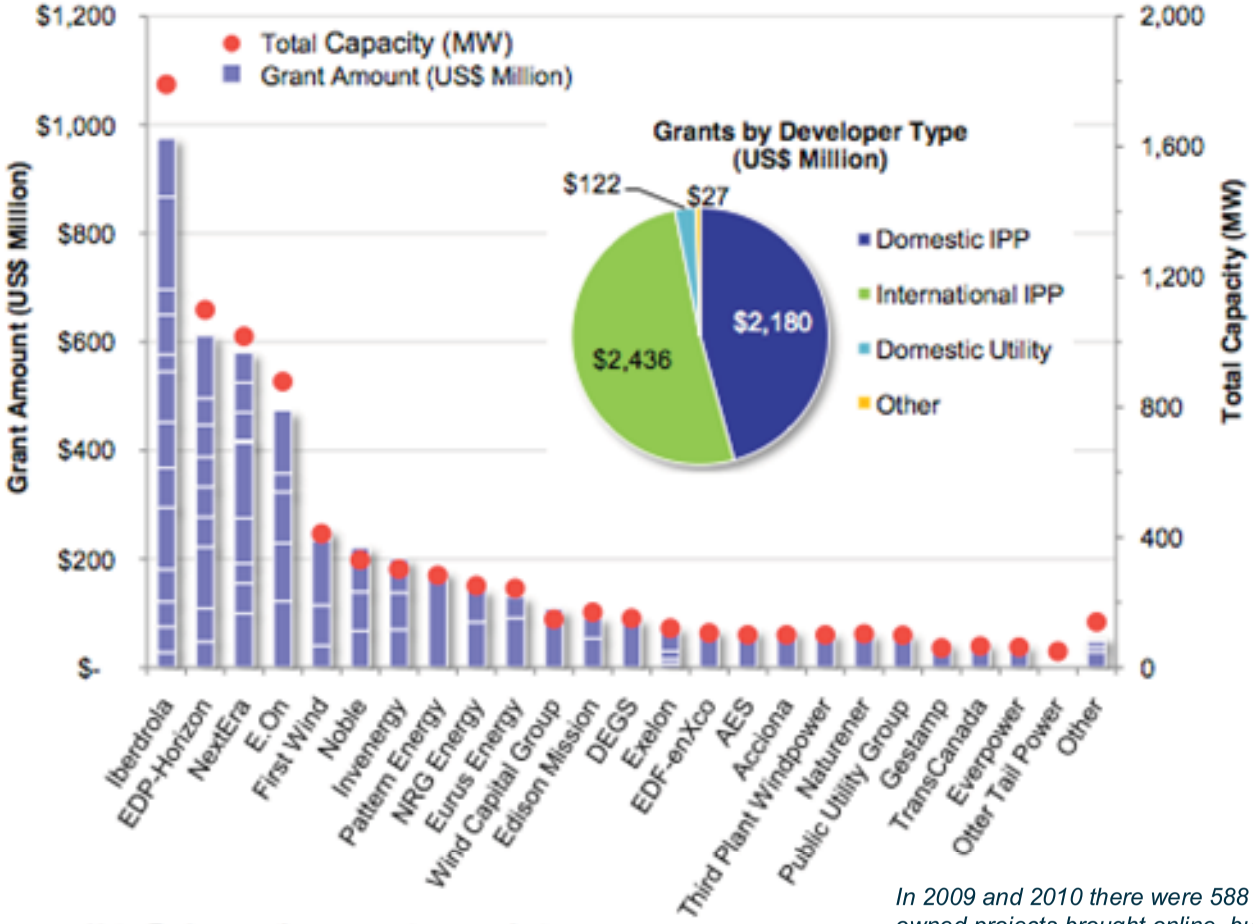
Over the past two years, independent power producers (IPP) have provided 90% of wind capacity additions in the U.S.



Note: Each separation represents one project
Source: US Treasury, IHS Emerging Energy Research

In 2009 and 2010 there were 588 MW of utility-owned projects brought online, but only 193 MW of these received the grant.

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Opportunities to attract private capital to scale energy storage deployment rest in the hands of those who make and implement policy, including at the state/PUC level.

AES Energy Storage

	Costs	Revenues
Equity **Profits**	i.e. Investment Tax Credit Leveling the playing field for storage vs other clean energy technologies. ➢ Congress	i.e. Pay For Performance Reward superior flexibility through market mechanisms ➢ FERC/ISO
Debt **Risk**	**Technology Risk**	**Forward Sales**
	i.e. Loan guarantees, CEDA Drive scale capital in advance of readiness by commercial capital markets ➢ DOE, Congress	PPAs Driven by “carrots” (i.e. PPA incentives) or “sticks” (i.e. clean capacity standards) ➢ PUC

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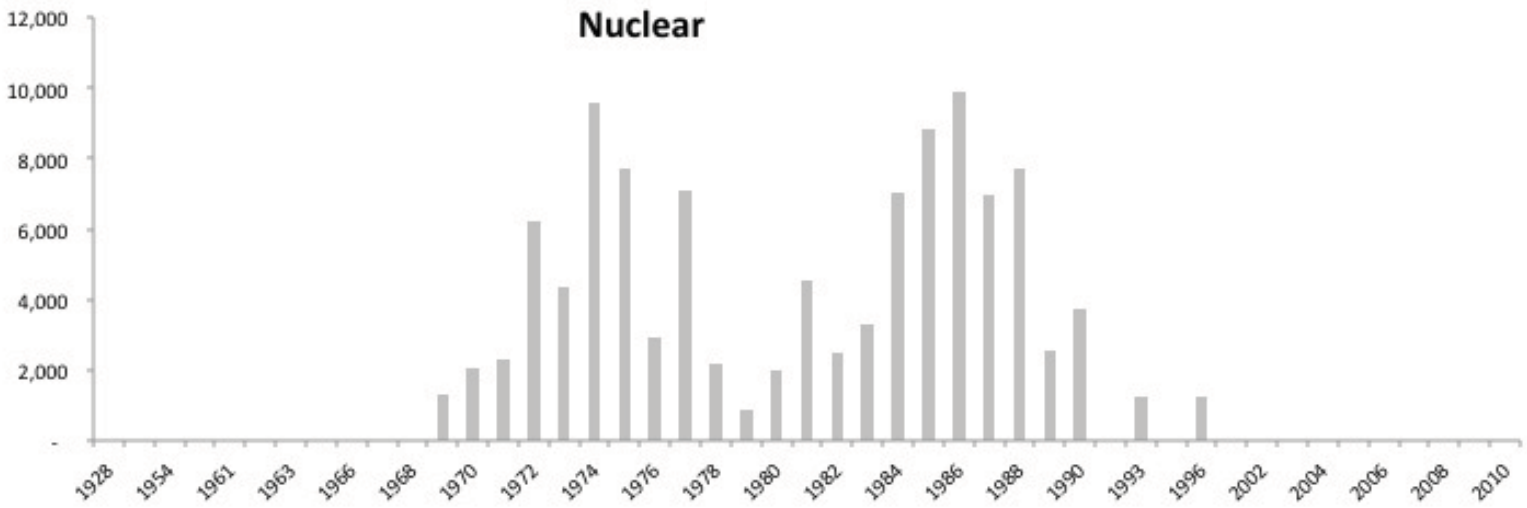
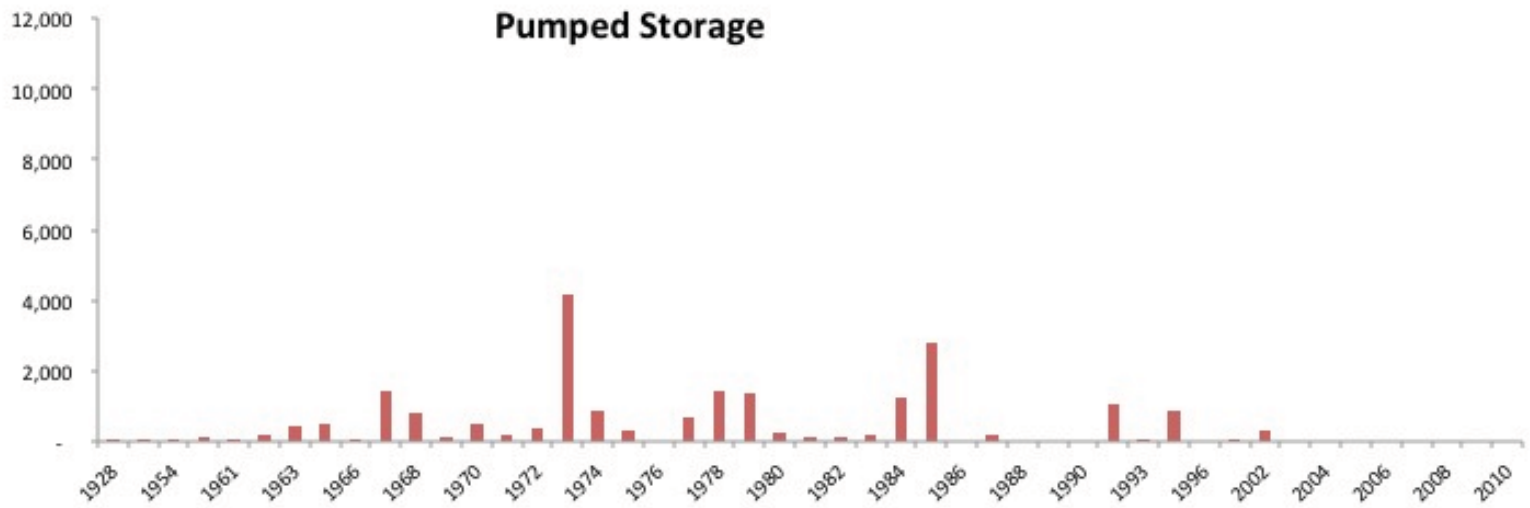
By the way… history shows that the previous wave of inflexible resources (nuclear) had some flexible counterparts (pumped hydro) added in step with them.





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