



# Noble Americas Energy Solutions

How Renewable and Other Environmental Offerings May Fit in  
Your Energy Procurement Strategy

Jung Suh

October 6, 2011



## Noble Group Corporate Overview

### ▶ The Noble Group

- **Global supply chain manager** that specializes in the origination and delivery of agricultural, industrial and energy commodity products.
- **Investment grade**, publicly traded company, with **2010 revenues in excess of \$56 billion**
- **Ranked #242 on the Fortune Global 500** (2010) with more than 150 office and plant locations in 38 countries across 5 continents

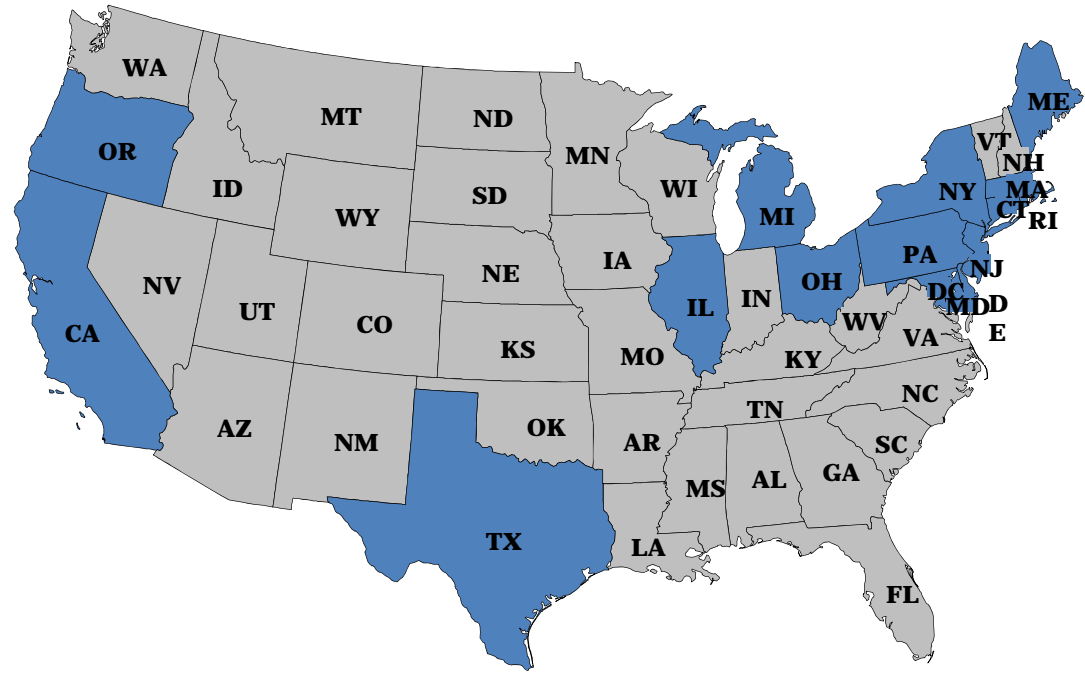


## Noble Solutions Corporate Overview

- ▶ **Noble Americas Energy Solutions (“Noble Solutions”)**
  - **5th largest** retail electricity services provider in the country with nationwide presence
  - Serves more than **6,000 MWs** of commercial & industrial customers in **17 states** across US
  - Only **ISO 9001:2008-certified** energy services provider in the country
  - Part of family of companies owned by **The Noble Group**, acquired in 2010



Noble Americas Energy Solutions provides retail electricity in all deregulated states nationwide.



<b>Power</b>		<b>Gas</b>
<b>Active Markets</b>	<b>Potential Markets</b>	<b>Active Market</b>
<b>California</b> <b>Delaware</b> <b>Maine</b> <b>Massachusetts</b> <b>New Jersey</b> <b>Oregon</b> <b>Pennsylvania</b> <b>Ohio</b>	<b>Arizona</b>	<b>California</b>
<b>Connecticut</b> <b>DC</b> <b>Maryland</b> <b>Michigan</b> <b>New York</b> <b>Rhode Island</b> <b>Texas</b> <b>Illinois</b>		



## Noble Americas Energy Solutions - Northeast

- ▶ Licensed to sell power behind 33 utilities in **NY, NJ, CT, MA, ME, MD, DE, PA, RI and DC**
- ▶ Currently serving more than 650 **customers** through 9,200 meters for a total NE load of approximately **1,250 MW peak**
- ▶ Northeast regional office located at 581 Main Street, Woodbridge, NJ
- ▶ Satellite office in Boston, MA
- ▶ **Ability to price and deliver a variety of product structures customized to your load and risk tolerance**

## Proactive Approach for Energy Procurement

### **Risk Mitigation**

- Portfolio diversification
- Addressing risk via layering

### **Budget & Cost Management**

- Improved budget & exposure forecasting
- Aligning of energy procurement strategy with financial targets
- Optimal cost allocation
- Tariff Support

### **Transparency**

- Custom reporting and analysis

### **Efficiency**

- Better execution, speed & accuracy
- Open Order and Trigger Flexibility
- Built in support for exposure analysis
  - Robust modern framework

## Products & Offerings



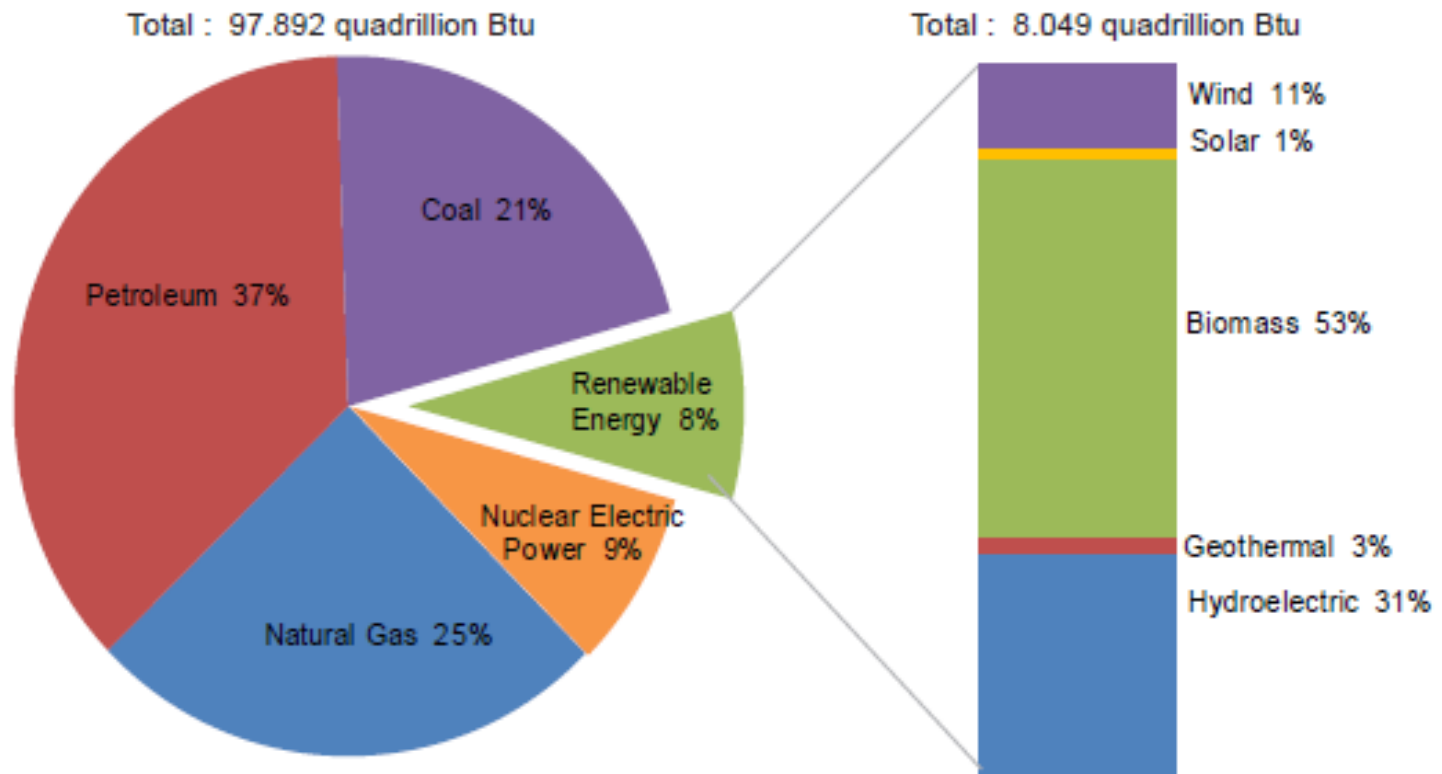
- ▶ **Full suite of electricity products**
  - Fixed Price
  - Index Pricing
  - Customized hedging: On Peak/Off Peak; Seasonal
  - Open Order and Trigger flexibility
- ▶ **Demand Response**
- ▶ **Renewable Offerings**
  - Full range of RECs sourced from wind, solar, biomass, etc.
  - Custom renewable power can be sourced from specific projects

## Understanding Renewables

- ▶ Market Growth
- ▶ Terminology
- ▶ Regulatory
- ▶ Compliance vs Voluntary Markets
- ▶ REC Tracking
- ▶ Benefits

# U.S Energy Consumption by Energy Source, 2010

Figure 1. Renewable energy consumption in the nation's energy supply, 2010

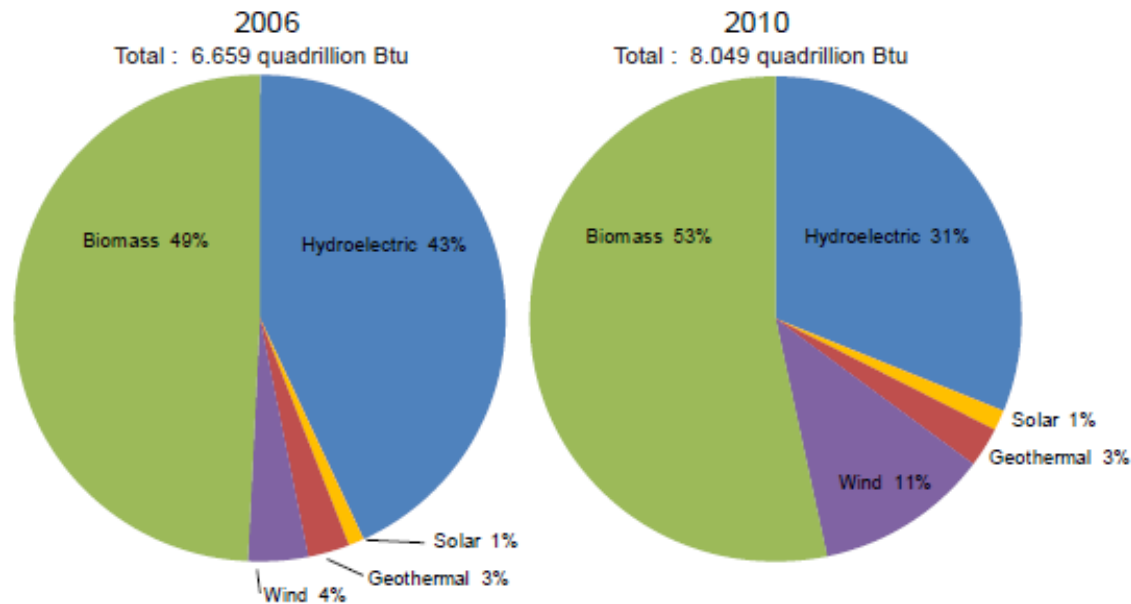


Source: U.S. Energy Information Administration.

## Renewable Energy Consumption by Energy Source 2006 and 2010

- Renewable energy has grown approx. 5% annually from 2006 to 2010
- Wind has grown 37% and solar 12% annually in the same period

Figure 2. Renewable energy consumption by energy source, 2006 and 2010



Source: U.S. Energy Information Administration.

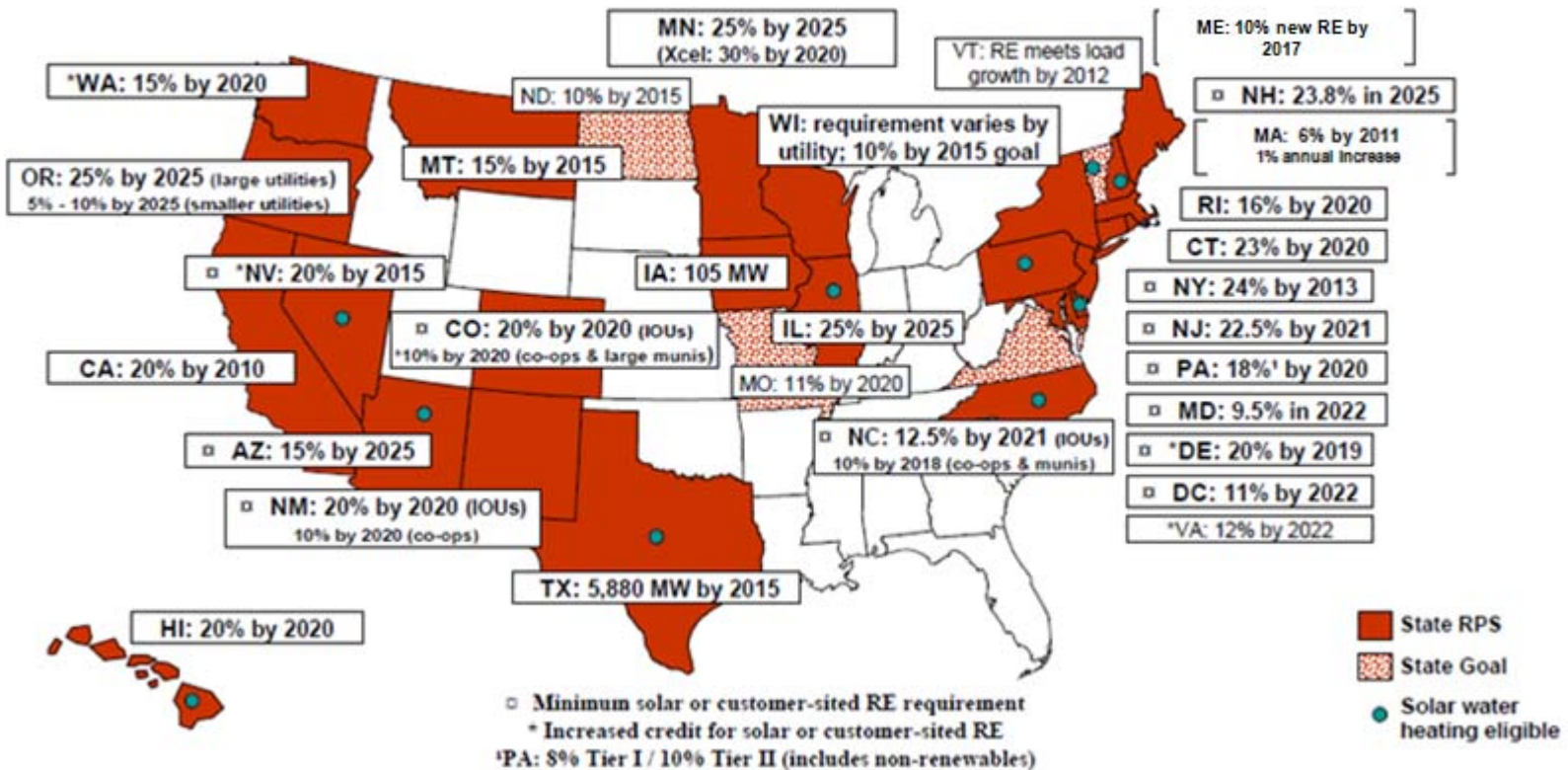
## Terminology Defined

- ▶ **Renewable or Green Energy**—electricity generated from resources such as solar, wind, geothermal, biomass and low impact hydro.
- ▶ **Renewable Energy Credits (Certificates) “RECs”**
  - Captures the attributes of the particular type of renewable generation. This “unbundling” allows for the attributes of renewable energy (wind, solar, biomass, etc.) to be tracked and sold separately from the electricity.
- ▶ **Green-e Certified RECs**
  - Subcategory or “branded” RECs managed by the Center for Resource Solutions
- ▶ **Carbon Offsets**—used to offset greenhouse gas emissions
- ▶ **Renewable Portfolio Standards “RPS”**
  - Mandates or standards for renewables have been adopted by 37 states and DC.

# Renewable Portfolio Standards by State

DSIRE: [www.dsireusa.org](http://www.dsireusa.org)

## Renewables Portfolio Standards

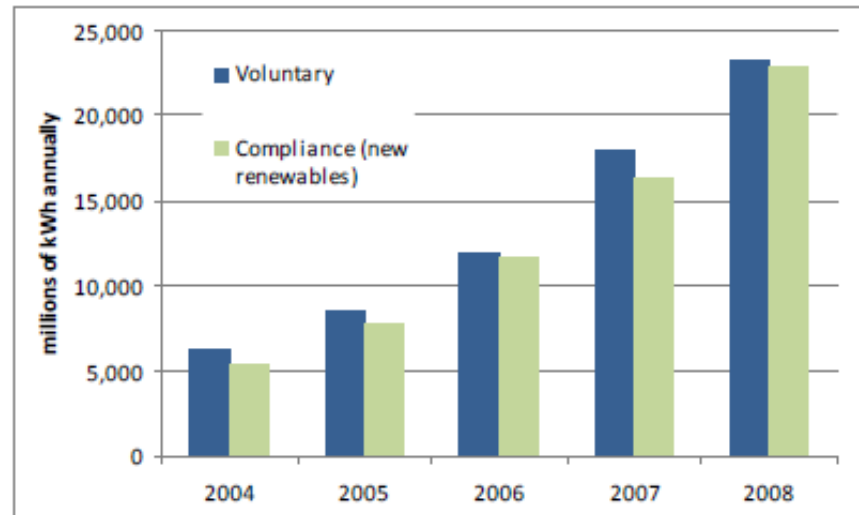


## Compliance vs Voluntary Renewable Markets

- ▶ **Compliance Market**
  - Driven by Renewable Portfolio Standards enacted in several states. States with mandated RPS require that retail suppliers obtain a set percentage of the electricity sales from renewable sources.
  
- ▶ **Voluntary Market**
  - Voluntary programs are driven from corporate demand from environmental goals, disclosure and marketing objectives.

## Voluntary vs Compliance Markets

- ▶ Voluntary market has exceeded the compliance market in 2004-08 and reached an estimated 40 million MWh in 2010.
- ▶ By 2015, NREL projects the voluntary market to increase to 63 million to 157 million MWh annually.
- ▶ By 2010, RPS policies call for utilities to obtain more than 60 million MWh of new renewables, increasing to 100 million MWh in 2012.



Note: Compliance market data sourced from Lawrence Berkeley National Laboratory (LBNL) (Barbose 2009)

Figure 2. Comparison of voluntary and compliance markets for renewable energy, 2004-2008

## Estimated Voluntary Renewable Sales by Type

- ▶ Wind comprised the vast majority of voluntary renewable sales, followed by biomass and hydro.

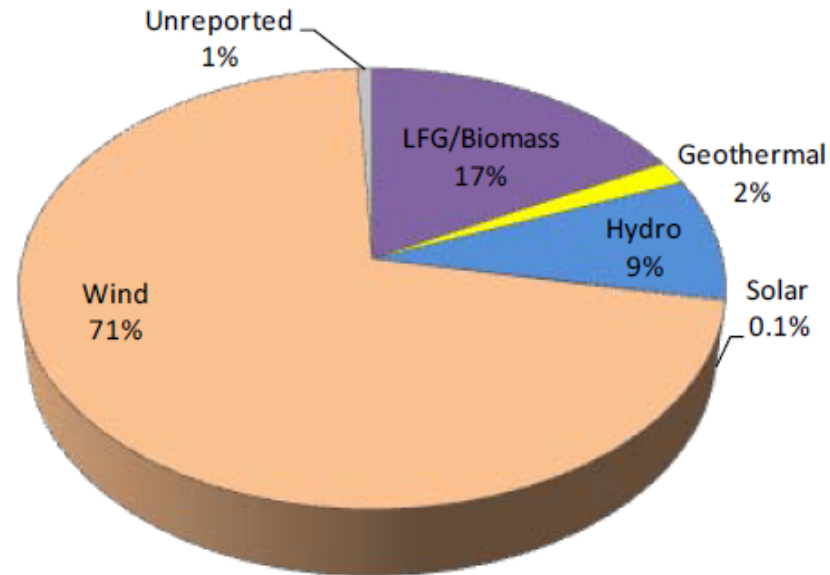


Figure 1. Estimated green power sales by renewable energy source, 2008

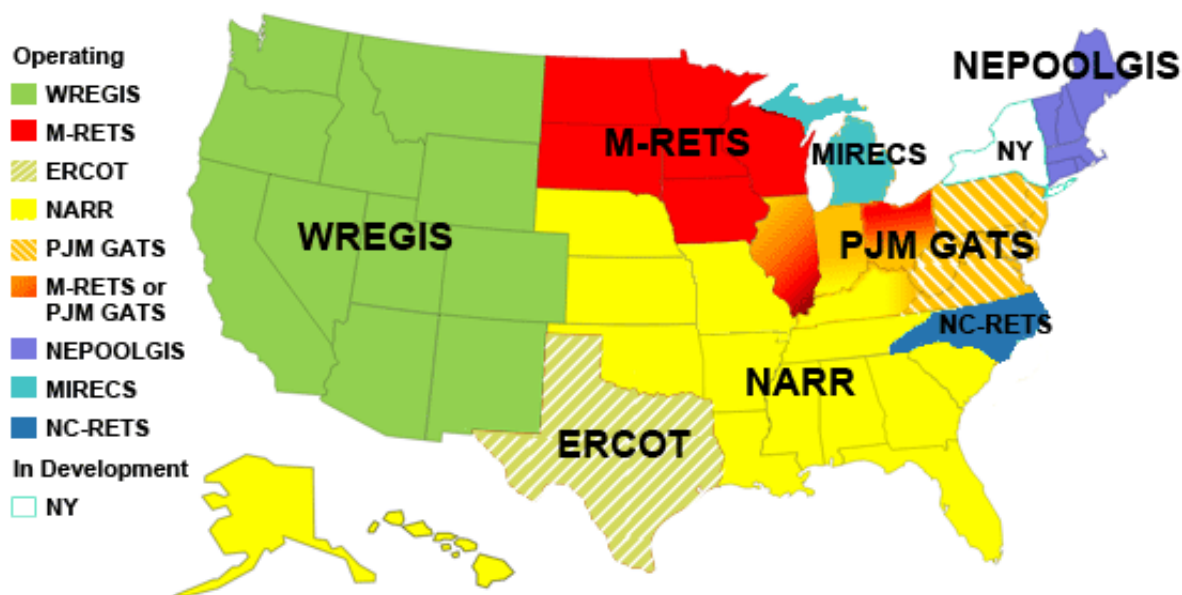
## REC Pricing Characteristics

- ▶ REC prices vary by state, vintage and type of renewable source
- ▶ Class I RECs are comprised of wind, low-impact hydro, landfill gas, etc.
  - NJ Class I \$2/REC
  - CT Class I \$13/REC
  - Green-e Certified \$1/REC
- ▶ Solar is designated as SREC and trades as a separate class
  - NJ SREC \$200/SREC
  - MA SREC \$525/SREC
  - PA SREC \$50/SREC

## REC Tracking - Avoiding Double Counting

- ▶ Double counting occurs if the same RECs are supplied to different customers.
- ▶ Preventing double counting
  - **Center for Resource Solutions for Green-e certified RECs**
  - Make sure your supplier utilizes accepted tracking systems for REC compliance.

Figure 1. Certificate Tracking Systems



Source: EPA Green Power Partnership

## Benefits of Renewables

- ▶ The benefits of purchasing Renewable Energy are meaningful and differ based on the end user.
  - Reduce or avoid air emissions, water consumption, thermal pollution, waste noise and adverse land-use impacts.
  - Make regions more attractive to do business by avoiding costly emission-control measures.
  - Renewables typically result in virtually no net carbon emissions.
  - Corporate leadership, marketing and reputational benefits.

## EPA Green Power Partnership Top 15 Purchasers of Renewable Energy (As of July 2011)

Rank	Company	Annual Green Power Usage (kWh)	% of Total Electricity Usage	Green Power Resources
1	Intel Corporation	2,502,052,000	88%	Solar, Wind
2	Kohl's Department Stores	1,450,080,000	101%	Solar, Wind
3	Whole Foods Market	752,257,623	100%	Solar, Wind
4	Commonwealth of Pennsylvania	500,000,000	50%	Various
5	City of Houston, TX	438,000,000	34%	Wind
6	Starbucks	421,921,000	52%	Wind
7	Johnson & Johnson	416,510,688	39%	Biomass, Solar, Wind
8	Staples	341,509,408	52%	Biogas, Solar, Wind
9	City of Dallas, TX	302,880,000	40%	Wind
10	HSBC North America	300,000,000	112%	Wind
11	U.S. Department of Energy	295,974,615	6%	Geothermal, Solar, Wind
12	Lockheed Martin Corporation	274,907,487	15%	Solar, Wind
13	Cisco Systems, Inc.	270,209,528	29%	Biomass, Wind
14	Wal-Mart Stores, Inc.	263,533,433	8%	Biogas, Biomass, Solar, Wind
15	U.S. Environmental Protection Agency	262,100,000	100%	Wind



- ▶ Renewable purchases should be aligned with your corporate objectives.
- ▶ Renewable purchases should be coordinated with your energy procurement.
- ▶ Risk Mitigation, Budget & Cost Management, Transparency and Efficiency should be the guiding principles for energy procurement.

For Questions, Please Contact

- ▶ Jung Suh  
Director, Sales  
610-717-6472  
[jsuh@noblesolutions.com](mailto:jsuh@noblesolutions.com)