US ERA ARCHIVE DOCUMENT

an independent energy solutions company



# **Energy Savings Performance Contracting Green Servicizing**

June 23, 2011

### **Company Overview**



- Ameresco, Inc (NYSE: AMRC)
   is a leading independent
   Energy Services Company
   (ESCO) in North America
- Delivering long-term customer value and environmental sustainability through alternative energy solutions, energy efficiency and innovative facility renewal strategies



### **Experience**

- Engineering-based company
- \$5 billion in Energy Solutions implemented
- 30 years experience in design, operation and management of energy supply, usage, and assets
- Award-winning expertise in energy asset development
- Independent company, not affiliated with any utility or parent company – technology and equipment neutral



#### **Solutions**

#### Clean. Green. Sustainable.

Energy	Energy Supply	Energy	Renewable
Efficiency	Management	Infrastructure	Energy
Energy Savings Performance Contracting  Demand-side Management  Demand Response  Turnkey Design/Build  Facility Renewal  LEED Construction  Power Quality & Reliability	Commodity Procurement  GHG Measurement & Monetization  Rate Analysis & Negotiation  Price Risk Mitigation  Billing Administration  Market & Regulatory Analysis	Asset Monetization  Plant Rehabilitation  Facilities Management  On-site Cogeneration  Distributed Generation	Landfill Gas  Biogas  Solar - PV and Thermal  Wind  Biomass  Geothermal  Hydroelectric



### **Energy Efficiency**

Energy Savings Performance Contracts (ESPCs):

- Self-funding energy projects
- No upfront capital required
- Design and implement energy conservation measures
- Guaranteed energy savings
- Savings accrue and pay for project implementation costs



#### What is an ESPC?

- Energy Savings Performance
  Contracts <u>bundle</u> energy services
  and infrastructure improvements:
- □ improving operational efficiency
- enhancing existing structures
- □ reducing energy consumption





#### **Outcomes from an ESPC**

- Reduced Carbon Footprint
- Facility Renewal
- Improved Efficiency:
  - Upwards of 25-45% reduced energy/water consumption
- □ Local Economic Impact





### **Energy Saving Performance Contract**

- □ The ESPC contractor carries the contracting risk and secures third-party financing
- Projects are paid for over an agreed term with <u>Guaranteed</u> Energy and Operations and Maintenance Savings
- Ensures long-term measurement and verification of energy savings

ESPC is alternative-financing and enables agencies/clients to meet sustainability goals and reduce costs when appropriated funds are not available



### **Key Points**



- □ Mandatory savings guarantees
- Savings must exceed payments in each year
- Measurement and verification (M&V) of savings is mandatory
- Contract term cannot exceed25 years in the federal sector



### Hill Air Force Base, Utah





#### \$17.7 M Comprehensive Energy Projects:

- 2,250 kW LFGTE Plant
- 210 kW PV Array
- Facility & Energy System Improvements
- First DOE BAMF Project, First LFGTE Project in Air Force and DOD, First LFGTE Project in Utah
- 20 Year Operations, Gas Purchase, and Power Purchase Agreements



### **Great Lakes Naval Training Center**

- □ 1,500 buildings 16 million sq.ft.
- ☐ Since 1997, the projects have saved 1,308,100 MBTUs of thermal energy
- Measures include:
  - New 11MW Cogeneration System
  - 4 MW backup capacity with dieselpowered generator
  - Facility-wide SCADA system for centralized control of electricity
  - Replacement of 1+ miles of steam and condensate piping, steam traps, & pipe insulation



Project Capital: \$101 M

Annual Savings: \$12 M



### **Boeing Company**

- □ 20 Year Agreement
- Design-build, Own, Operate & Maintain
- ☐ High Temperature Hot Water/Chiller Water Plant
  - 5,500tons of Chiller Capacity
  - 56 MMBtu/hr of HTHW Boiler Capacity
- Fully automated, efficient and reliable operations since 2001



Huntington Beach, CA



## FCI Texarkana, Texas

Federal Correctional Institution (FCI), Texarkana, TX, houses 1,700 inmates.

Total Investment: \$10.6M

Cumulative Savings: \$34.8M over 20+ yrs

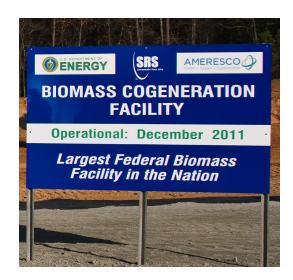
- □ 6 Energy Measures (EM) being implemented, including Biomass Renewable Plant.
- Will reduce carbon emissions by 4,200 tons annually.





#### DOE Savannah River, S.C. Biomass Cogeneration

- □ Largest Renewable ESPC in history
- \$795M DOE ESPC to construct a biomass cogeneration facility and two smaller biomass heating facilities
- Facility design capacity of 240,000
   pounds per hour (PPH) of steam and
   20 megawatts (MW) of electric power
- \$34M annual cost-savings, \$840M savings over 19 years
- Reduces greenhouse gas emissions by over 100,000 tons annually







### DOE Savannah River, S.C. Biomass Cogeneration







### **US DOE, National Renewable Energy Laboratory**

- Energy Savings
   Performance Contract and
   Renewable Energy Plant
   that Utilizes Local Wood
   Biomass
- ☐ Generates 9 MBtu/hr, or Approximately 600 Gallons Per Minute of Hot Water



Golden, CO





### National Archives, Washington DC

- □ ESPC & Cogeneration
- □ \$1.2 Million Annual Savings, one square block
- Maximizing Efficiency, Water
   Use and Steam
- □ National Archives I & II





#### **ESPCs Federal Sector**

As of May 2011, more than 570 projects worth \$3.9 billion were implemented at 25 Federal agencies in 49 states and D.C.

These projects saved an estimated:

- 32.8 trillion Btu annually
- (Equal to the energy consumed by 345,000 households or a city with a population of 893,000)
- Saved \$13.1 billion in energy costs
- (Approximately \$10.1 billion goes to fund energy efficiency projects and \$3 billion is reduced Federal Government spending)



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### **Thank You**

