



John Carter
Honeywell

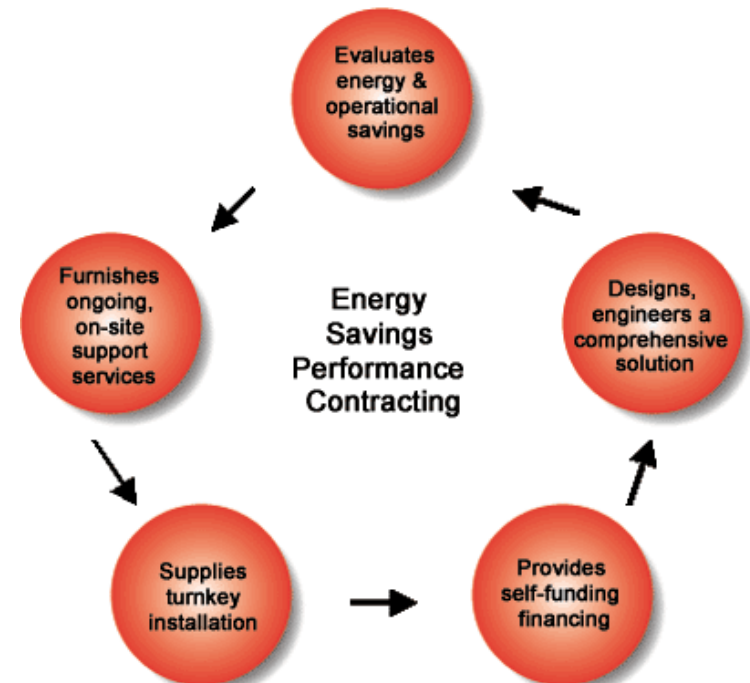
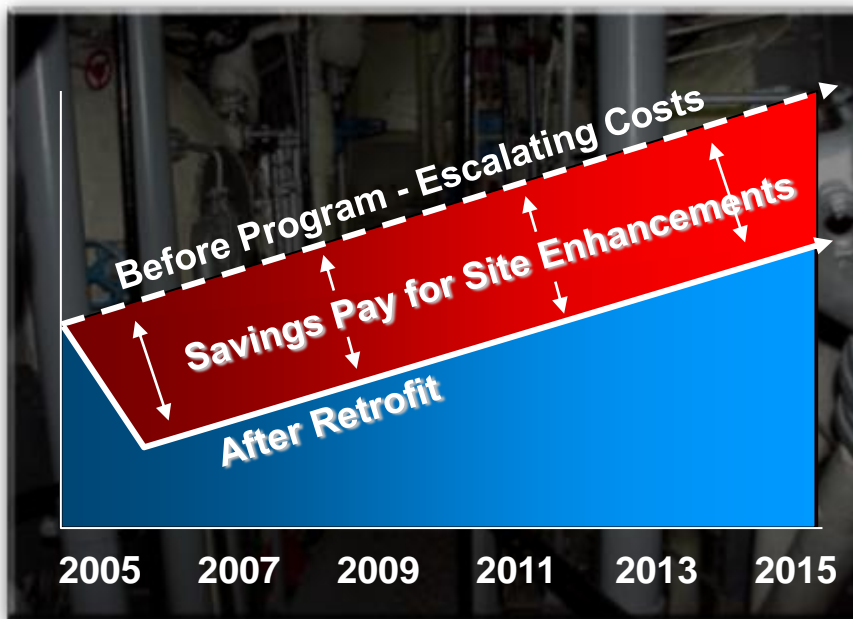


NORTHEAST SUSTAINABLE ENERGY ASSOCIATION

Honeywell

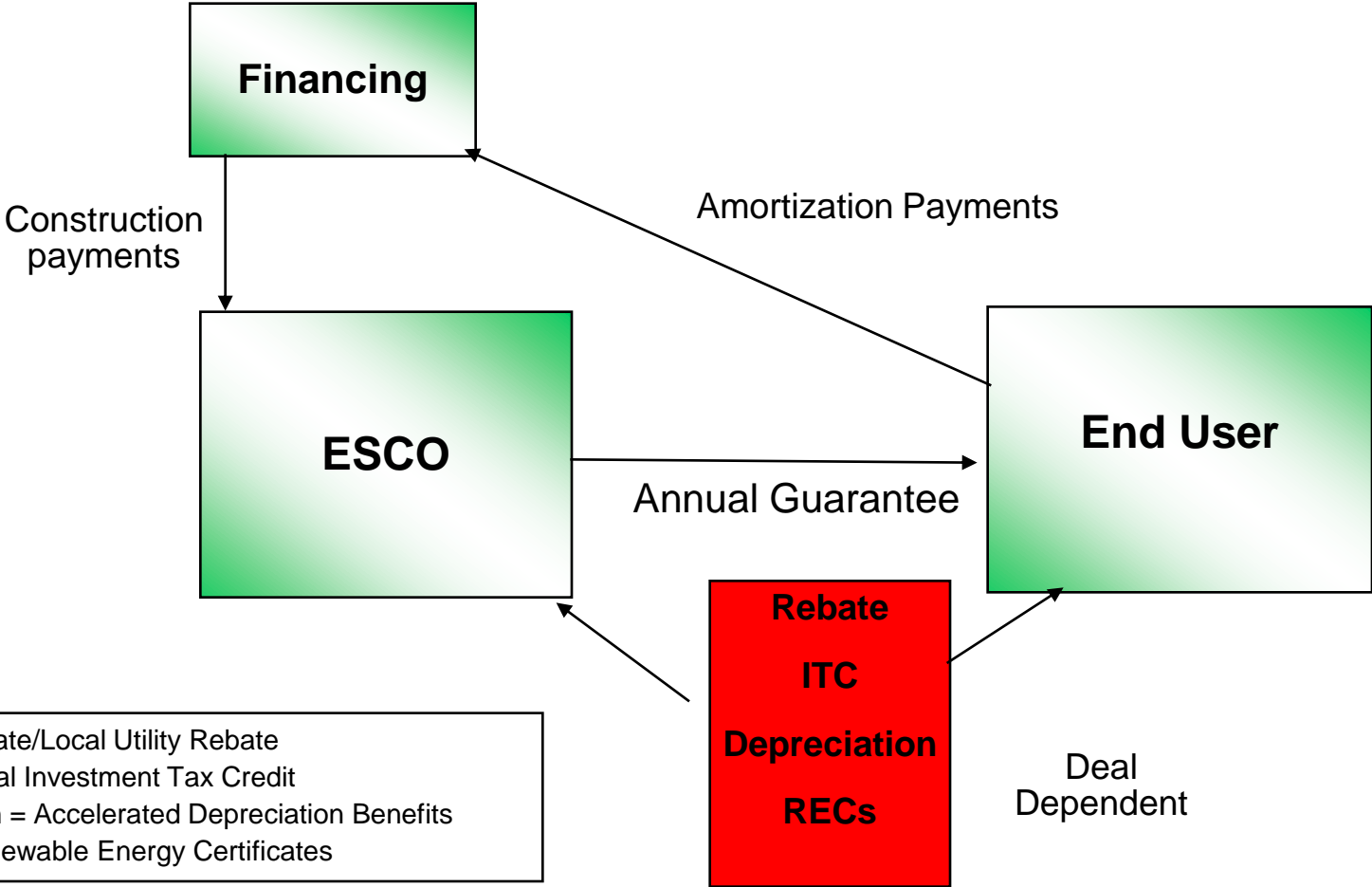
How Performance Contracting Works

A comprehensive “**self-funded**” program whereby the equipment and technology installed to modernize buildings and facilities is **paid by guaranteed energy and operational savings**.



Comprehensive Programs - ESCO Accountability

ESPC Deal Structure



Key ESPC Issues

Energy Savings Performance Contract

- Legislatively Enabled and Limited
- Power of the Bundle
- Comparatively Simple
- Many Financing Options
- More Attractive for Public Entities

Many Different Funding and Financing Options

Case History EIU

- Guaranteed Performance Contract
- Eastern Illinois University
- Enrollment: 11,966
- Campus size: 320 acres
- Large Higher Ed biomass heating plant
- Reducing 20,000 MTeCO₂
- 20-year Guaranteed Savings Contract
- Biomass bundled with Traditional ECMs



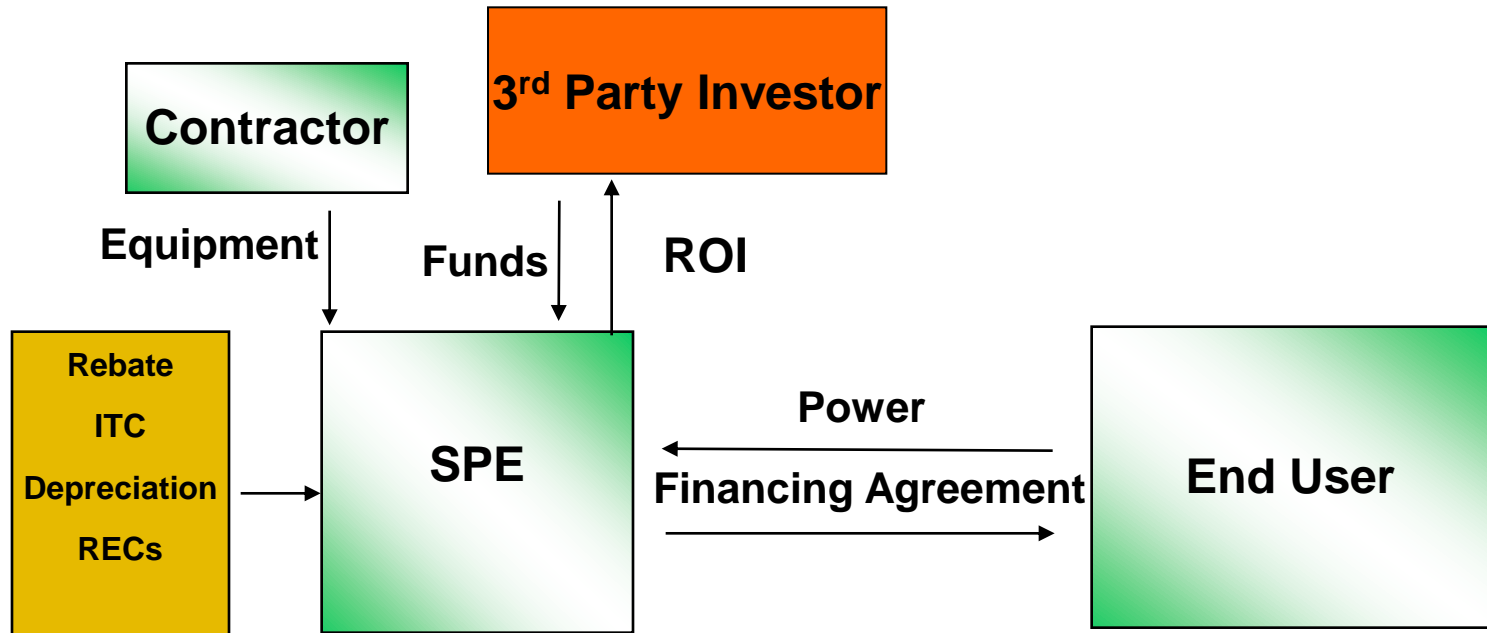
“This program allows us to make critical improvements and keep our facilities comfortable and functional for years to come. Plus, we’re able to reduce our carbon footprint at the same time. It’s an ideal solution for the university and surrounding community.”

Ft. Dix Case History

- Federal ESPC
- One of the largest solar projects for the Army - 3,200 panels
- Generate approximately 815,000 kilowatt-hours of electricity annually
- SREC's helped justify the program
- The solar installations are part of a \$17.6-million program
- Other ECM's – water; lighting; etc.
- Decrease energy consumption by 10 percent; water by 5%
- Help meet federal efficiency and renewable energy mandates,

“I am proud to have played a role in making this solar project possible at Fort Dix,” said Congressman John Adler, who represents Joint Base McGuire/Dix/Lakehurst. “The program will help Fort Dix cut operating costs, increase energy efficiency and reduce its environmental impact.

PPA Deal Structure



- **Rebate = State/Local Utility Rebate**
- **ITC = Federal Investment Tax Credit**
- **Depreciation = Accelerated Depreciation Benefits**
- **RECs = Renewable Energy Certificates**

Key PPA Issues

Power Purchase Agreement

- **Complicated Deal Structure**
- **Single Measure Approach**
- **Take or Pay**
- **Tax Incentives are Critical**
- **Off Balance Sheet for End User**
- **Serving Utility Relationship**



Many Solar Projects are PPA's

Perris Case History

- Riverside County California
- Installed solar panels on the roofs of new carports at five sites
- 20 year PPA
- Produce 370 kilowatts of electricity
- Dependent on ITC & Utility Rebates
- Enough energy to power about 100 homes per year
- Cover 20 percent of the city's electricity needs
- Carports will provide more than 240 shaded parking spaces

“We’re meeting our energy goals and protecting the environment by using renewable technology,” said City of Perris mayor Daryl Busch. “The entire program will reduce carbon dioxide emissions by 960,000 pounds per year — equivalent to removing more than 90 cars from the road.”

Denver, Colorado

Energy: Conventional

Electric	\$78.48 MWh
Gas	\$7.21 MMBTU
Oil	\$15.28 MMBTU

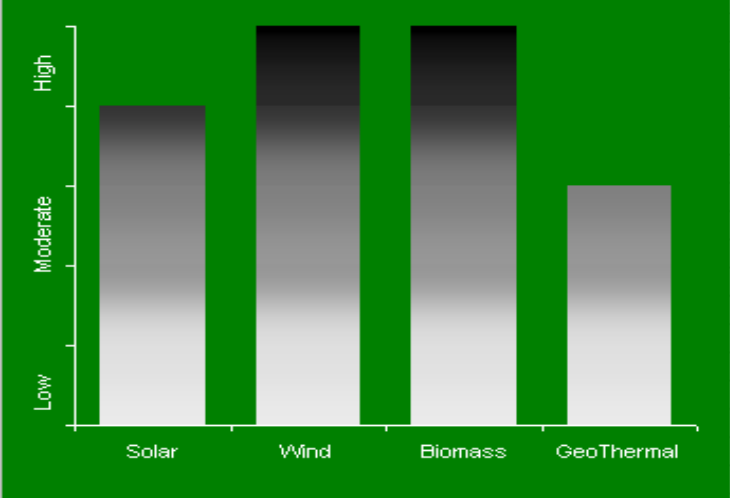
Local Attributes

Heating Degree Days	7,823 HDD °F
Cooling Degree Days	412 CDD °F
Ave. Air Temp.	43.3 °F
State Rebates	YES
Federal Rebates	YES

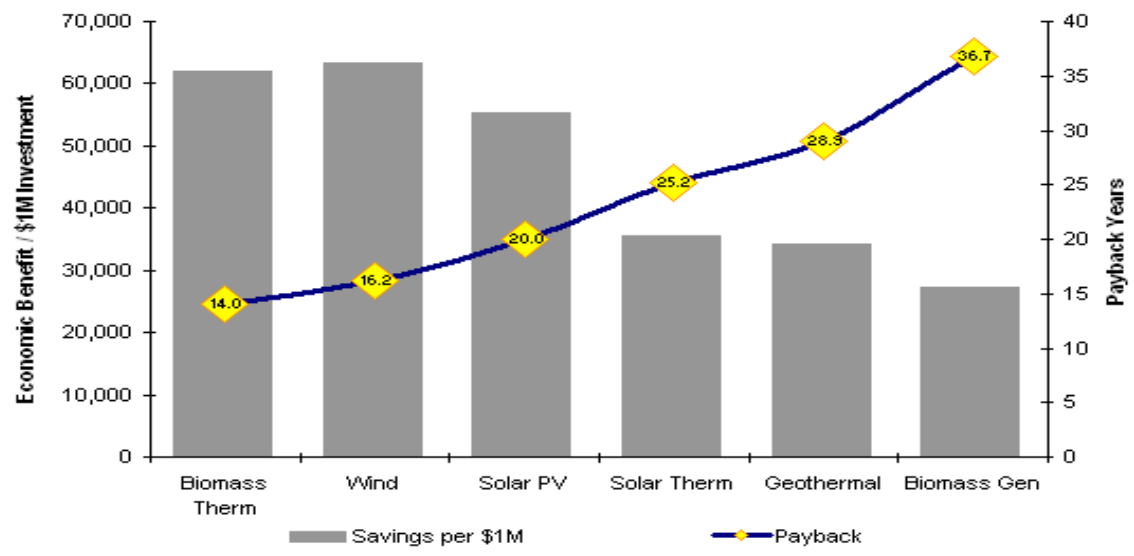
Energy: Renewable

Wind	6.8 Meters / Second
Biomass	946.1 Tons / Mile ²
Solar	5.8 Daily kWh / Meter ²
Geothermal	5.4 Mean Earth °C

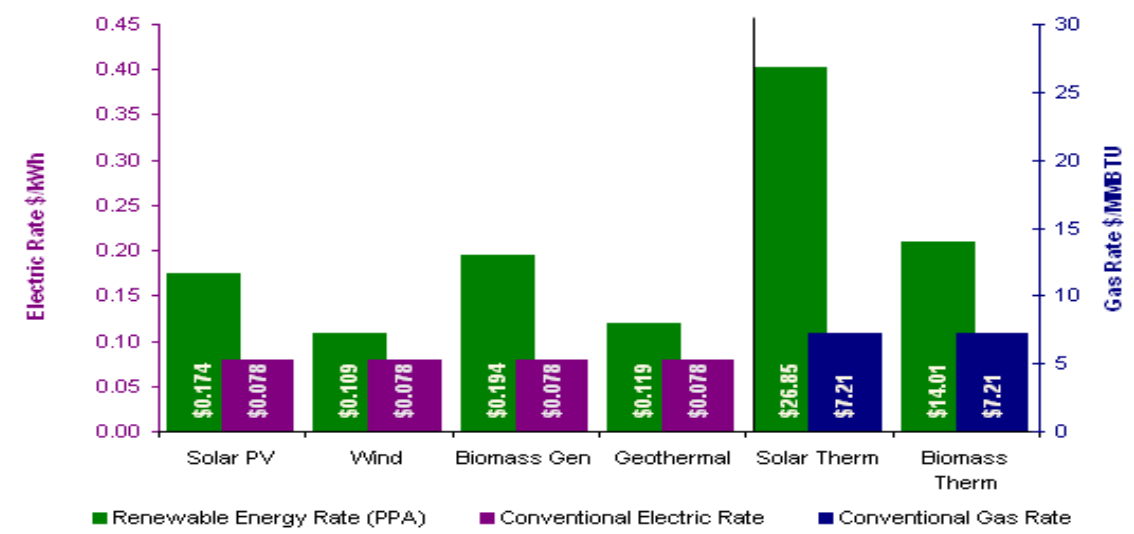
Renewable Resource Potential



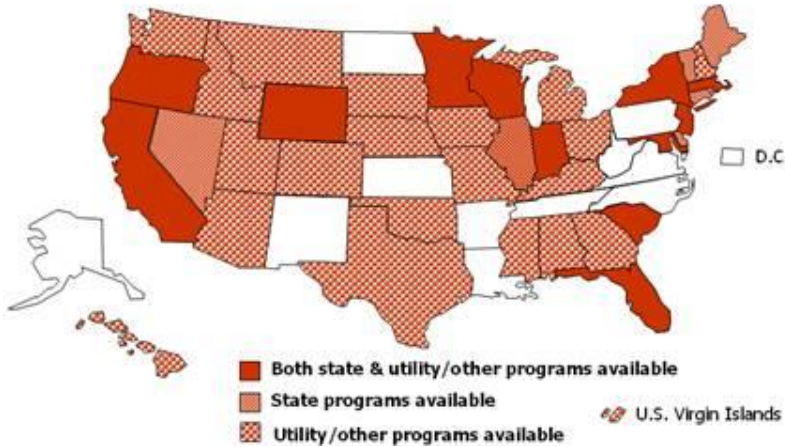
Capital Purchase Economic Benefit / \$1M and Simple Payback



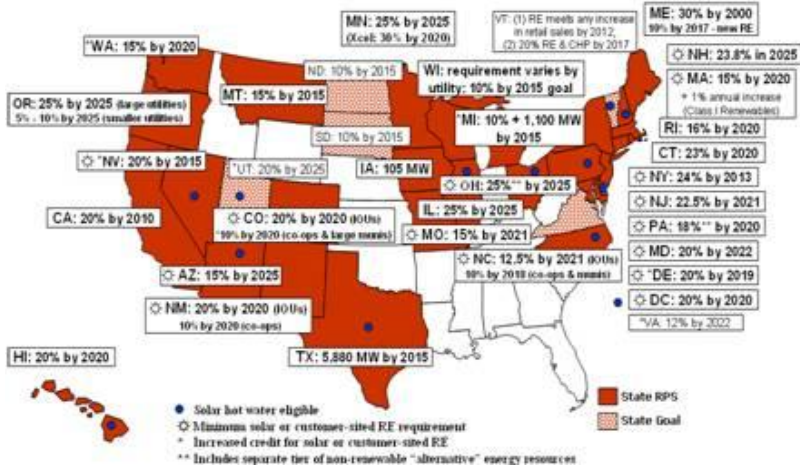
Renewable Energy Rate (PPA) versus Conventional Energy Rate



Rebate Programs for Renewable Energy Technologies



Renewables Portfolio Standards



State Income Tax Credits & Deductions for Renewables



Solar/DG Provisions in RPS Policies

