

### **DISTRIBUTED GENERATION, Renewable Energy Overview**

Murphy International (MI) provides an integrated, energy service company (ESCO) design and development approach - to ensure health, comfort, innovation, and cost savings in the design and operation of commercial buildings, retail space, universities and education campuses, resorts, office parks, residential, municipal and government facilities. Our expertise in green facility design and clean energy development provides clients with the tools and information necessary to make informed decisions on improvements to the energy efficiency of your new or existing facility while being a good steward to our natural resources. As an ESCO, we use several contracting vehicles that leverage MI investment and, therefore, require no capital investment on the part of the client. Instead, MI finances and implements, the performance based contract turnkey work for the energy efficiency and facility infrastructure upgrade projects in exchange for a fixed monthly fee based on a share of the verified energy, resource, and operational savings produced. We view the ESCO process as a partnership and, therefore, focus on strong communications with our clients to achieve consistency with their goals and objectives and assure complete customer satisfaction. Ours is a whole-facility approach that focuses on achieving energy efficiency improvements and environmental compliance on a least cost lifecycle basis.

Energy efficient construction does not need to cost more than conventional design. We have the ability to support a range of energy efficiency activities from undertaking low-risk, high return actions such as switching to energy efficient lighting, installing solar films and awnings to deeper retrofit activities involving building shell upgrades and renewable energy systems. We assist facilities to develop comprehensive energy programs based on their unique needs and facility use, which allows them to make upgrades as either their budgets allow over time or for which our performance based finance economic options best apply.

#### How do you get started?

How you get started depends on a number of different factors. Our energy and building specialists will help you right from the start by assessing the age of your current facility and its equipment, your type of facility, hours of operation, local utility rates, and your access to financial resources to determine what kind of upgrades are most beneficial.

# **Finding Funding**

Low-risk upgrades such as lighting require little funding. For those that do require investment we offer traditional and non-traditional financial resources. A well-designed upgrade can provide your facility with revenue from energy savings that can be used to pay off the investment for new equipment. Renewable energy systems can also create an additional source of revenue by energy sales to your electric utility. Once the cost of the system has been recovered, positive cash flow from the sale of electricity to the grid will be realized. .

#### **Energy Efficiency Roadmap**

We help you design and implement an energy efficiency roadmap tailored to your needs and resources based on a combination of the following measures:

### Simple Strategies:

- Upgrading interior finishes
- Optimizing Mechanical Systems
- Energy Efficient Lighting
- Weather Stripping
- Thermal Controls

#### Larger Strategies:

- Building Envelope
- Lighting
- Commercial Food Service Equipment
- Heating, Cooling and Ventilation
- Office Equipment & Appliances
- Energy Management Systems
- Onsite Renewable Energy Generation (Wind, Solar, Combined Heat and power)
- Green Power
- LEED Certification (Leadership in Energy and Environmental Design)

We would love to help you assess the natural resources available for on-site energy generation and create designs for your facilities that maximize the use of these resources, resulting in lower utility bills, healthier environments, and inspiring work places. Visit us at <a href="https://www.murphyintldev.com">www.murphyintldev.com</a>



#### FINANCE OPTIONS FOR COMMERCIAL RENEWABLE ENERGY, CHP, WIND, and SOLAR

#### 1. Cash Purchase - Own the system and the energy

#### **Own the Renewable Power System**

The simplest path to financing a commercial energy project is to purchase the system directly. You buy and operate the solar installation, which allows you to directly benefit from any available federal, state and local clean energy incentives.



If you have available capital and tax appetite to absorb tax credits and accelerated depreciation, you may find cash purchases to be the best option.

# **Cash Purchase Benefits**

#### • Quick, Streamlined Process

o Reduce the total time required for an energy project and benefit from clean, electricity as quickly as possible.

# Attain Greatest Potential Savings

 By avoiding third party expenses and financing costs, you can maintain complete control of your solar energy system while realizing the highest savings from your investment.

# • Efficient Application of Incentives

The owner of a commercial energy installation maybe eligible for various environmental, tax credit, or grant funding for the system value. When combined, the cost of a commercial clean energy power projects can be offset by up to 50%.

# Protection from Rising Electricity Prices

Secure fixed costs for the system lifetime and reduce your exposure to volatile energy rates.

#### Promote Clean Energy

 Take advantage of Renewable Energy Credits (RECs or CDM's) and promote your corporate social responsibility message by becoming a clean powered company.

# **MI Cash Purchases**

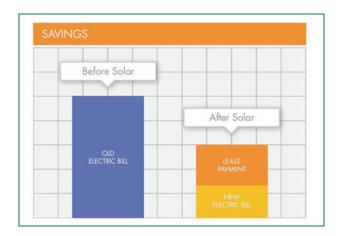
MI has combined a highly skilled and experienced team of installation experts optimized advanced and proven technology to offer comprehensive solutions with one goal in mind: delivering the most energy possible. MI installations use the best in class technology to realize the greatest total savings on energy costs. In other words, a straightforward cash purchase of a MI system typically offers the maximum return on a clean energy investment.



#### 2. Renewable Energy Lease - Lease the system, Use the energy

### **How Renewable Leases Work**

A renewable energy lease is a financing option that allows businesses to generate clean electricity with little to no upfront capital investment. Like traditional equipment leases, renewable energy leases provide use of the renewable energy equipment itself in exchange for a monthly lease payment. You benefit from the clean electricity generated from the rented renewable energy installation.



The combination of known lease payments and lower utility bills typically leads to an immediate reduction in electricity costs and provides increased savings over time. At the end of the lease agreement (typically after 15 – 20 years), you have the option to purchase the system at a reduced cost, renew the lease, or have the system removed.

#### **Lease Benefits**

- Low Upfront Cost
  - o There are little to no upfront costs for a lease, allowing you to reduce your initial capital investment.
- Save on Electricity Costs
  - Monthly payments are more than offset by the reduction in electricity bills, resulting in total electricity cost savings.
- Protection against Rising Electricity Prices
  - Secure a low electricity rate at a fixed price per kilowatt-hour and reduce volatile energy rates.
- Flexible Options
  - At the end of the term, typically between 10 to 20 years, you may choose to purchase the power system for a small, residual
    value, renew the lease or opt to have the system removed.
- Partnership Choices
  - Allows you to work with your existing equipment lease financial partners.

# **MI** Leases

Whether you want to work with your preferred financial institution or you want to explore alternatives, MI can help you negotiate the terms of a renewable energy lease. With an expansive network of specialized leasing partners, MI knows how to accurately forecast energy output, secure favorable lease terms, and streamline the negotiation process to help you minimize your financial commitment while maximizing the return on your clean energy and energy efficiency investment.

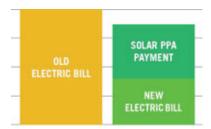


#### 3. Power Purchase Agreement (PPA) - Buy the energy

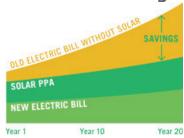
### **How Renewable Energy PPAs Work**

A renewable energy PPA is a financing arrangement that allows businesses or government agencies to purchase clean electricity with no upfront capital cost. To achieve this, a "host" organization provides unused rooftop, land, or parking lot space, facility space as the location for an energy installation. MI, as the third party PPA provider, pays for the cost of the installation and assumes all responsibility for ownership, operation, and maintenance after the solar project is complete. As the host organization, you enter into an agreement to purchase the solar electricity produced by the system owned by the PPA provider at a predetermined rate per kilowatt-hour, the same unit of measurement on your standard utility bill.

# **Save on Electricity Every Month**



# **Protect Your Business from rising Electricity Prices**



A well-structured PPA allows you to reduce electricity costs immediately and realize increased savings over time as grid electricity prices rise. Once the PPA contract period expires (typically after 15 - 20 years), you can purchase the system at a reduced price, initiate another PPA, or have the energy system removed.

#### **MI PPA Benefits**

- No Capital Investment
  - No initial capital investment, since you only pay for the solar electricity that is produced.
- Fixed Energy Rates
  - A PPA provides a powerful hedge against volatile electricity prices.
- Full-Service Project Management & Maintenance
  - MI designs, develops, and operates your clean energy system from start-to-finish. You have no responsibility for owning, operating or maintaining the solar system equipment.
- Monetize Tax Credits & Solar Incentives
  - Benefit from solar tax credits, even if your organization has no tax liability to offset. The PPA financier is able to monetize available tax incentives and pass these savings on to you in the form of a lower PPA rate.



# Murphy International Development LLC

#### The MI PPA:

MI has developed, financed, and installed many megawatts of renewable energy systems globally using all resource including wind, solar, geothermal, CHP, biomass, and various hybrid combined technologies. Our market-tested, track record proven, process is designed to be streamlined and easy to implement. MI partners with top tier PPA financiers, technology suppliers, law firms, and collaborates with Government Trade Promotion and finance Organizations, NGO's, International Banks, , and various equity/debt funds, as we work with you to design the best PPA to meet your organization's energy needs.

#### 4. Financing Options for US Public Agencies

# **How Public Renewable Energy Financing Options Work**

Public entities are able to take advantage of numerous financing options not available to corporate entities, including special incentives, tax-exempt leases, and exclusive government subsidy bonds. Done correctly, modest funding combined with low-interest debt is sufficient to finance public solar projects.

#### **Benefits of Public Solar Financing Options**

- Access to a range of incentives not available to the average consumer. When combined with standard rebates, exclusive bonds and
  grants such as American Recovery and Reinvestment Act (ARRA) subsidies, Energy Efficiency and Conservation Block Grants (EECBGs), and
  Clean Renewable Energy Bonds (CREBs) allow public entities to dramatically reduce the cost of a new solar installation.
- Ability to take advantage of Tax Exempt Municipal Leases (TEMLs), which allow public entities to finance projects by entering into lease
  agreements with traditional lenders. Offering full ownership and access to lower costs of debt, TEMLs can make your solar installation
  extremely affordable.
- Collective ownership of our energy future. Developing solar power within the public sphere helps to build a more sustainable tomorrow.

  MI has the expertise to help you and your facility source the most attractive funds for your upcoming solar installation.











# **INVESTMENT APPROACH**

MI is focused on providing clean energy to qualified and suitable clients who meet our investment criteria. We use our background and experience in asset-based finance, risk management and renewable energy system design and construction when reviewing potential investments. We consider the following aspects of a project:



#### **Process**

In connection with a decision to invest, MI will complete the initial stages of a project together with the client and the installation company. Then, finalize, and sign documents and have the installer start construction:

			Мо	nths	Years		
Process	1	2	3	4	5	6	>> 25
INITIAL STAGE							
Site visits, structural and electrical	X						
PPA terms established, including estimated cost savings for host	x						
System size, layout, and costs finalized	X						
PPA CONTRACT							
Power Purchase Agreement executed by Host & PPA Provider		x					0050471041
INSTALLATION							OPERATION
Permits and approval for interconnection with grid obtained		х	X				
PV modules and other equipment ordered and delivered		X	X				
PV array and electrical system installed			X	X	х		
FINAL STEPS							
System inspected, commissioned, and interconnected					X		
System operated and maintained by PPA Provider for PPA term						x	

