



SunTerra EnergyBlock™ Executive Summary

Problem

Energy efficiency is a primary consideration in new construction. The increasing costs of power and energy are causing architects and builders to find cost-effective construction methods that produce a building that uses the least amount of energy possible for heating and cooling. The concrete block industry is declining and seeing new competition because of its inability to comply with new energy efficiency requirements based in the International Energy Conservation Code (IECC) being adopted.

Solution

SunTerra EnergyBlock is a new patent pending product and wall construction method that connects continuous rigid insulation panels to concrete masonry unit blocks (CMU) and meets or exceeds the IECC insulation requirements in all climate zones. A PVC extrusion called a masonry insulation connector (MiC) strip is inserted into a dovetail groove designed in the CMU for a strong connection. The MiC strip provides a surface to attach choice of siding, stucco, cultured stone or brick veneer to the exterior or wallboard to the interior, basically acting like a stud.

There is a design and utility patent pending in the US and Canada for the product and block design. At present there have been two custom residential homes constructed using SunTerra EnergyBlock with several more designed and others in consideration.



Masonry Insulation Connector

With exterior insulation, the interior decorative wall surface produces a natural thermal battery that reacts beneficially to the living space of the building. It absorbs heat, stores heat, and gives it back as needed for warmth in the winter. And, it absorbs unwanted heat to keep interior temperatures cool in the summer, significantly reducing heating and cooling costs.

Competitive Advantages

- Meets or exceeds the new IECC, International Energy Conservation Code in all climate zones.
- Concrete block walls can be insulated as required providing an economical solution needed for the CMU industry.
- No restriction on exterior siding choice allows for any building design style.
- Less cost to implement manufacturing and to build than the competition.
- Takes advantage of thermal heat storage effect.
- Improves interior comfort and reduces cost of heating and cooling equipment.
- Better, stronger and cost competitive to other wall systems.
- A green product manufactured locally from recycled materials.

Market Size

While the building industry has gone through a seismic shift in recent years, there is still a market for building construction that is projected to grow. In 2010, 604,600 US residential home permits were issued. The data for 2011 shows 610,707, a 1% increase, showing that the trend is moving in a positive direction. This does not take into consideration our largest market, commercial and industrial building.

The U.S. Census Bureau of the Department of Commerce announced in March that construction spending during March 2012 was estimated at a seasonally adjusted annual rate of \$808.1 billion, 0.1 percent ($\pm 1.4\%$) above the revised February estimate of \$807.3 billion. The March figure is 6.0 percent ($\pm 1.9\%$) above the March 2011 estimate of \$762.6 billion.

The National Concrete Masonry Association (NCMA) estimates 900 million to 1.5 billion CMU blocks will be produced for wall construction in the US in 2012. We will be using the 900 million conservative figure for this market analysis. Our goal is to convert 5% of this market to SunTerra EnergyBlock over five years and capture a conservative share of other competitive wall construction choices including conventional wood framing (2%), insulated concrete forms (ICF) (20%), tilt-up concrete slabs (4%) and steel structures (3%). Our five-year sales volumes projections show over 95 million blocks using EnergyBlock in year 5 and sales of over 47 million lineal feet of MIC strip.

Competition

There are several alternatives to building with SunTerra EnergyBlock, but none of them offer the thermal mass benefits or high insulation value with design freedom.

The most closely associated building method is insulated concrete forms (ICF), which is becoming known as an efficient alternative to wood frame construction. There are also several products e.g. Korfil, NRG, Omni Block, and One Step that incorporate insulation with a complex CMU design. Our advantages are a lower cost to build, higher insulation values and the added benefit of thermal mass. This makes SunTerra EnergyBlock a superior choice for a fast growing market.

Other methods of commercial construction include concrete tilt-up, steel framed structures and CMU with added wall structures for insulation. While these methods are comparable in cost, they don't provide the insulation value or thermal mass benefit. SunTerra EnergyBlock also provides a faster assembly time without the

concern of dew-point moisture problems and gives designers the option for any type of exterior siding style.

In looking at wood frame construction, it costs less to build than a SunTerra EnergyBlock concrete wall. However, there are many advantages including higher insulation values, sustainable materials, structurally stronger building, and most importantly, thermal heat storage effect that produces even temperatures. When comparing energy savings to added mortgage payment on an annual basis, the SunTerra EnergyBlock, in most cases, costs less to operate or live-in per year. This will open up a new residential market to the CMU Industry.

Construction Cost and ROI

On average, a residential home will cost only 5% to 10% more to build with SunTerra EnergyBlock.

The variation in percentage is due to the option of incorporating a decorative masonry surface on the interior block walls, a value that more than offsets the additional cost to build with SunTerra EnergyBlock.

A commercial or industrial building with interior wall insulation will cost about the same as other methods with the added insulation benefits.

SunTerra EnergyBlock construction will reduce installation time and cost for a commercial or industrial building with exterior insulation.

Business Model

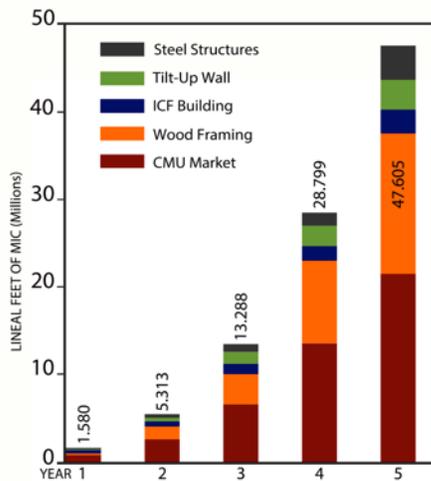
Our business model is simple in that we license the block design and sell the MIC to CMU manufacturers. We make our profit from margins on the MIC strip, calculating one lineal foot of strip for every two blocks sold. We will sell a non-exclusive license agreement to the CMU manufacturer for \$3,500 to produce and sell SunTerra EnergyBlock in their geographic region. This is money they will recoup through coop advertising and shipping fees. Of the over 350 companies accumulating 700 CMU manufacturing locations, we project to license 18.5% or 130 over the next three years. Second, we will require a

\$5,760 inventory purchase or 4,800 lineal feet of MiC strip. We then continue selling them MiC strip as required for ongoing production.

Sales and Distribution Plan

Sales will be directly to 350 CMU companies. There are over 700 US manufacturers and we will work through associations, targeting larger and multi-location manufacturers in the regions of highest construction growth.

Sales Numbers



Manufacturing and Assembly

The CMU block can be manufactured with a minor mold revision at any one of 700 regional producers using local aggregate materials throughout the US. The MiC strip patented in the US and Canada can be manufactured at chosen extruder locations in the US or Canada reducing freight expense using mostly recycled materials.

SunTerra EnergyBlock is assembled by a mason or contractor in the same manner per the same building codes as historically done, with the added benefit of continuous insulation to the exterior or interior wall surface, ready to attach siding or wallboard as normally done.

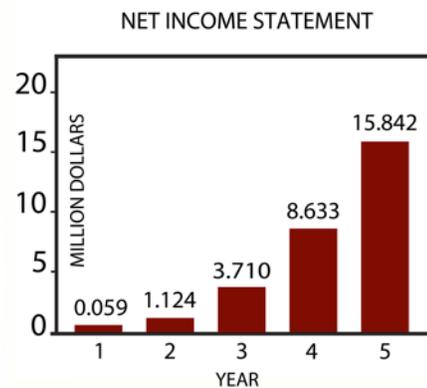
At present there have been two residential homes constructed using SunTerra EnergyBlock with several more in design and under consideration. The results from an energy efficiency perspective have been better than estimated. Energy costs are being calculated and achieved at less than half of

what they would be using conventional, wood-frame construction.



Net-zero SunTerra EnergyBlock home in Sisters, OR

Financials



Ask

We are seeking \$400,000 in capital investment, to take this product to the US and Canadian markets.

Sources and Uses

We will use the investment monies for general operation to manufacture MiC strip, CMU mold inserts, attend trade shows and create marketing materials for the licensees.

Exit Strategy

As we grow the business, it will become more attractive to larger CMU manufacturers, both regionally and nationally. It would be a natural investment for a supply-chain manufacturer to acquire the IP and business revenue from EnergyBlock for their larger distribution network.

