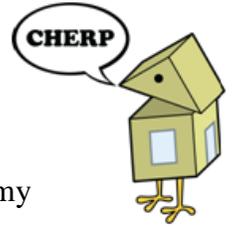


Claremont Locally Grown Power

A Community Home Energy Retrofit Project Initiative



- Establishes a Local Solar Industry
 - Creates Jobs
 - Contributes to the local economy
 - Improves local economy and the local tax base
- Allows Purchase of Residential Solar Power for Nominal Costs
 - Lowering electric utility bills for households
 - Reducing dependence on fossil fuels
 - Increasing City and State goals in utilizing renewable sources of electricity
 - Solar Homes that Increase property values
- Reduces Dependence on Fossil Fuels
- Allows for an improved local economy
- Attract other renewable energy businesses
- Improves local community energy independence

What Is Claremont Locally Grown Power (CLGP)?

Claremont Locally Grown Power is Sustainable energy and economics.

Imagine a solar panel made for you by residents of your own community. The bargain? Spend some of what you save in your community.

Claremont Locally Grown Power creates jobs and cuts power bills. A locally owned and operated manufacturing plant produces high quality solar panels carefully installed by local workers and skillfully made by residents of your community, for the benefit of your community.



CLGP uses patented, simplified manufacturing technology from idealPV. CLGP solar panels are safe, efficient and cost so little to make that each harvests enough value from the sun every two years to build another one. idealPV only licenses US 8,952,672 for manufacture within the United States.

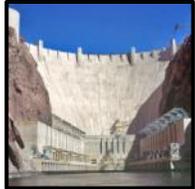


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What Is CLGP? (Page 1 Continued)

CLGP harnesses the other half of the economic value of solar.

Claremont will create the economic power of its own 32GWh (32 million KWh per year) distributed power plant. This is about 1% of the capacity of Hoover Dam, offsetting over 24,000 Tons of CO₂ each year.



The economics of CLGP are driven by injecting the value of the solar energy already falling on Claremont directly into Claremont's retail economy.

Here's how CLGP works: solar panels and equipment made by your neighbors will be provided as an amenity to you at little or no cost upfront or ever. Just like the good road in front of your home, free CLGP energy makes Claremont a better place to live and contributes to our local economy.

If you accept, CLGP, using local labor will install the panels on your roof and connect equipment to your electric service.

Once the proper safety inspections are complete, the system will be switched on and your electric utility bill will go down on average (\$860 annually @ 16¢/kwh 5,400kwh/yr). All you need to do is keep your trees trimmed, hose off the panels when they look dirty and let CHERP know how things are working out. You choose what to do with the money you save on electricity. We hope you will spend it in Claremont!

Studies indicate that consumers choose to spend savings locally, improving the local economy and generating sales/use tax. It is also well documented that reductions in utility bills raise property values.

CLGP uses local employment and the sun to inject \$7,200,000 into Claremont's local economy. Employment and personal income that Claremont's households were once forced to export out of town to buy imported electricity is made available to spend locally. Increased retail consumer spending is increased income to Claremont's business. In turn, these business grow and hire multiplying the economic effect to over \$20,000,000, a 7.8% growth in Claremont's economy.

Savings on energy bills directly adds to home values by between \$21,500 (\$860/4% mortgage rate) and 9%. It has been long established that energy cost savings are available to pay additional home loan principle and interest vs. a home without a CHERP improvement (The Appraisal Journal, pp 401, Evidence of Rational Market Valuations for Home Energy Efficiency). Studies have shown that green-certified homes sell for 9% more.

Local taxpayers will also benefit from solar arrays installed on municipal buildings. Money saved by the city will initially help pay for household systems using funds that would have been paid to utility companies for electricity. Once the program is paid for, all of the energy savings are passed on to the taxpayers.

By keeping it local, CLGP's construction phase generates more than 360 jobs stimulating a total of over 1,100 Jobs (3.2x). For every utility dollar saved by harvesting sunlight and spent in the community, \$1.80 (2.8x) more will be created in the business community for 25 to 35 years resulting in over 110 permanent jobs.



Glass, metal, plastic and other components manufactured in and near your community will be used at your CLGP assembly plant first, followed by those produced elsewhere in the U.S. Your CLGP plant pulls its supply chain with it and toward your community.

The CLGP Program is designed to be funded by the state as a revenue neutral infrastructure program for six years. After the first six years, the program generates a \$3,400,000 state revenue surplus each year for at least the next 19 years.

The state's support for the program may be in the form of loan guarantees for the construction phase and grants of increased tax revenues received by the state during the first six years of operation. The construction financing is paid off with municipal PPA sales, sales of federal tax incentives, solar incentives, community participation donations and grants of increased state tax revenue.



Will CLGP Create Jobs?

CLGP creates both direct and indirect jobs in the city. Local workers will be trained and employed to manufacture, install and service solar panels that are constructed using locally made materials whenever possible. These panels will then be installed on houses and / or commercial properties throughout the area at little or no charge to the property owner.

The direct benefit for local taxpayers is converting their utility expense for imported electricity into increased disposable income, available to spend within the region. Increased disposable personal income and property values resulting from avoided utility costs inject more than seven million



dollars a year into the local economy.

Figure 1 illustrates the job creation potential of CLGP. The light green section at the bottom represents 36 direct manufacturing jobs created by CLGP's solar panel assembly operation. The light blue portion of the figure represents 359 direct construction jobs created during the build out phase. These are the workers needed in addition to the 36 direct jobs described above, while the dark blue section represents an additional 430 indirect jobs. These indirect jobs are driven by the direct manufacturing and construction jobs

described above. Furthermore, the black portion of figure 1 represents an additional 110 direct and indirect retail jobs added for at least the 25-year energy production life.

After economic multipliers the local sales base impact is about 7.8%, a \$20M increase on an existing \$250M in sales. Locally Grown Power has about the employment, economic impact and increased city revenues of adding a large car dealership to the community. Without consuming any land, adding any traffic, cannibalizing any existing business or demanding any new city infrastructure.

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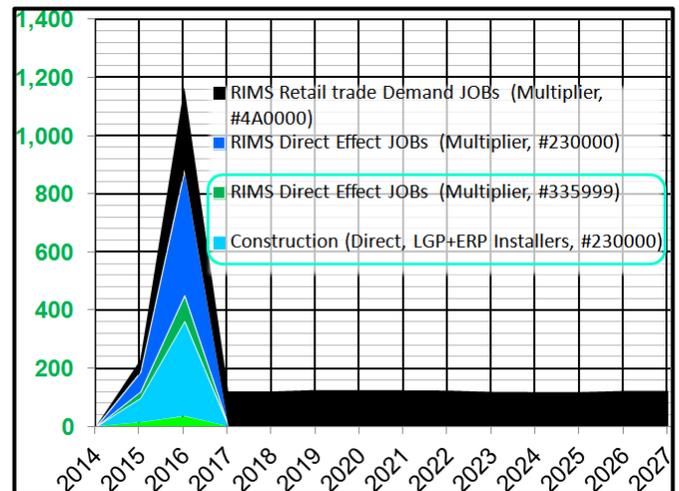


Figure 1

Jobs (Continued from Page 3)

Note that this analysis does not yet consider three positive knock-on effects:

1. Locally grown power installed on city property will avoid one million dollars a year in utility costs currently paid from tax revenues to out of town suppliers.

2. Increased employment will drive property tax revenues higher.

3. Increased disposable income will also drive charitable giving higher.

In macroeconomic terms, electricity, a commodity imported from outside the community, is replaced by a locally produced and consumed supply, igniting an accelerating local virtuous cycle: converting an economic drain on the community into an investment in the community paying returns to the community.

The Role of idealPV

CLGP is made possible by idealPV technology, which lowers the production cost of solar panels by reusing standard efficiency cells discarded by traditional solar panel manufacturers due to the inability of their outdated technology to use them. Furthermore, idealPV technology simplifies the solar panel assembly process to match the skills found in metropolitan labor pools.

Examples:

1. Soldering the photovoltaic cells together: a job similar to a plumber soldering copper pipe.

2. Cutting the encapsulation film to shape: a task similar to textile or upholstery work.

3. Laminating the solar assembly: a laminator looks and works much like a large clothing press.

4. Installing the mounting frames: a job of fitting and gluing extruded aluminum frame rails, similar to the same task in carpentry.

Additionally, if local glass, plastic film, aluminum extrusion, metal stamping, injection molding or circuit board assembly capability are available, these components may also be made locally, providing additional local benefits. If not already available locally, new businesses may arise to provide those components and subassemblies.

IdealPV offers a new, patent-pending module architecture eliminating reverse conduction and decreasing effective cell length. The idealPV approach stems from Rocky Mountain Institute's PV Balance of System Design Charrette of June 2010. The power electronics group identified a significant cost reduction that was available through joint optimization of module design and power electronics. This insight provided the seed for the idealPV concept. Since RMI's Charrette, the idealPV design was developed and tested by a small team of highly experienced engineers, resulting in full-scale prototype modules.

Whereas conventional solar panels require top grade solar film, CLGP panels are more tolerant and can be assembled with materials that cost one third to one fourth of standard cost.

In addition to the economic benefits of the locally grown power, idealPV solar panels offer many benefits over existing imported alternatives, such as they may be deployed on multiple headings in the same array, are mostly shadow tolerant and perform well when partially covered with dirt and snow.

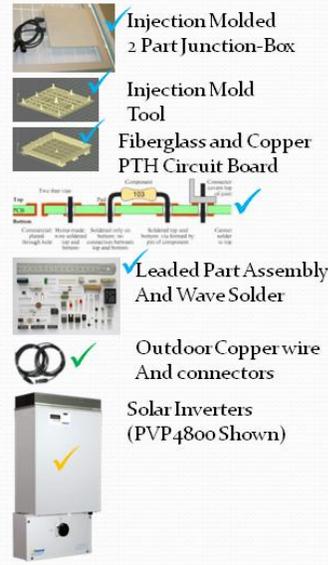
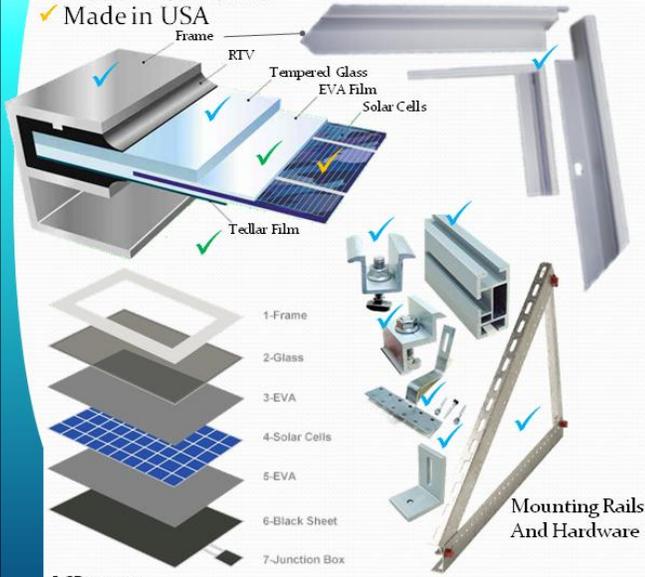
idealPV Solar Panels:

- Are inexpensive to manufacture.
- Are easy to construct.
- Require little workforce training.
- Use local laborers, already skilled in similar construction techniques.

idealPV components

All assembled here, Many made here

- ✓ Proudly made in LA County USA
- ✓ Made in California
- ✓ Made in USA

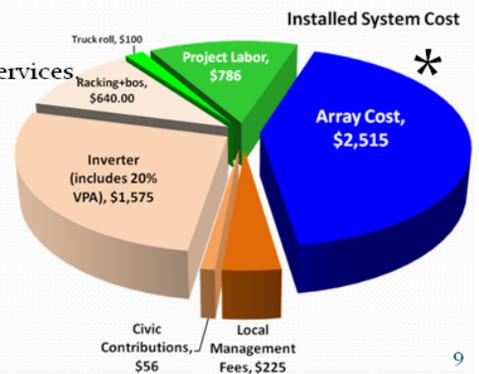


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14

How it works, LGP

- As the largest financial beneficiary, the State funds the city
 - Mission: Increase state revenues, grow manufacturing middle class, protect the environment
- The city provides locally manufactured & installed solar power at little or no cost
 - Households keep utility savings which are now available to spend within the city
 - Best economics are to serve the lowest income households and city use first
- The city procures solar power systems & installation services from its LGP
 - Jobs are created in manufacturing, construction, supply chain, etc both direct and indirect
- The LGP produces and installs systems under 501.(c3) or (c4) not for profit (NFP) rules
 - Sells ITC, MARCS & SREC... via IRS special purpose entity (FP entity associated with LGP)
 - May supplement funding via out of county sales, grants and/or donations (tax deductible)
 - Sponsors community priorities (1% of costs)
 - Labor: Training, Volunteer, Paid and/or Contracted
 - Materials: Donated (tax deductible) and/or Purchased
- The LGP contracts professional management & logistics services
 - Locally owned, for profit professional services company
 - Sub chapter S or LLP (single tax)
 - Purchasing, scheduling, quality, compliance, HR ...
 - Funded by per panel installed fee structure (4% of costs)



* Standard household system 3.8 kwdc
 Standard household tax deductible donation is \$590
 \$5.9k Costs shown are before tax effects of approx. 50% (ITC/MARCS)

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9

How Will The Solar Panels Be Produced?

A plant capable of producing enough solar panels to completely equip a city of 36,000 residents in five years would occupy about 5,000 square feet of light industrial space housing about \$600,000 of equipment. The equipment is standard in the solar industry. idealPV solar panels use 100% standard materials, processes, and procedures except that many materials, process and procedures have been eliminated or simplified.



Each idealPV produced offsets ~260kWh per year of its 25 to 35 year production life.

Each would cost about \$160 to build (about 45 minutes to assemble each). The plant would produce up to 105,000 panels a year (50 panels/hour, five days/week) or enough for about 6,000 typical southern California households per year.

How Is CLGP Paid For?

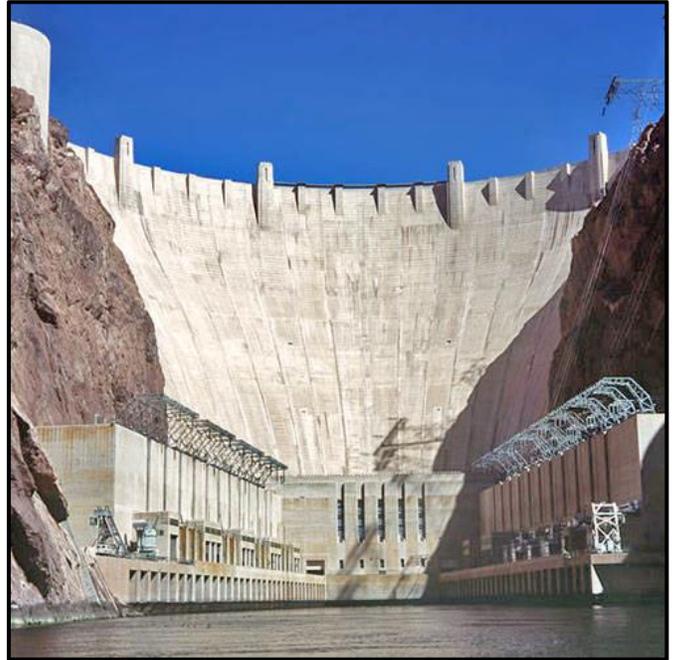
The Locally Grown Power (LGP) Program is designed to be funded by the state as a revenue neutral infrastructure program for six years. After the first six years, the program generates a \$3,400,000 state revenue surplus each year for at least the next 19 years. The state's support for the program may be in the form of loan guarantees for the construction phase and grants of incremental tax revenues received by the state during the first six years of operation. The construction financing is paid off with municipal PPA sales, sales of federal tax incentives, solar incentives, community participation donations and grants of increased state tax revenue.

The entire program takes two years to construct and the construction financing is retired by year six. Since the program only supplies 70% of the energy required by half of the city's households, additional phases may be considered. In a later phase, the program may also offer commercial PPAs to local business. The margin could fund further household deployments generating more retail spending which directly benefits local businesses.

Three Phases of CLGP Job Creation

Claremont Locally Grown Power job creation follows three distinct phases. In phase one, the Locally Grown Power production facility is equipped, workers trained, production ramped from zero, and the first year's production installed on municipal infrastructure. The municipal government becomes net zero.

In phase two, the residential community is built out over the next year. Every year from this point forward, the community will be receiving the economic input of its own 32GWh (32 million KWh per year) distributed power plant. This is about 1% of the capacity of Hoover Dam.



In phase three, there is a decision point.

- Since the initial CLGP program was designed to satisfy about 35% of the original community power demand, a CLGP II program may be instituted to make the entire community energy independent.

- A CLGP program may be implemented to make the commercial community energy independent as well.

- A large scale, for profit, solar farm may be constructed.

- The CLGP program may be wound down, the capital equipment sold, leaving a significant base of permanent jobs, household DPI and city cash flow for decades.

Conventional solar panel installations require all panels to face the same direction. With idealPV technology, despite the requirement for multiple headings and angles, this example home efficiently uses twenty idealPV solar panels. Including weather, seasons and installation, this is the model for calculating economic effects of Locally Grown Power.

(National Renewable Energy Labs, PVwatts & Sandia National Laboratories, PVvalue)



How idealPV Helps The Local And The Global Community

The idealPV technology provides for positive environmental payback in many respects. The notion of solar power as a clean, renewable resource is at the point of installation and use. However, one must consider the entire component construction cycle to account for the whole picture. Roughly, 5% of all cells manufactured cannot be used by conventional solar panel manufactures. The reason is technical: the cells must withstand a certain amount of reverse voltage because of the way the panels are built and controlled. The discarded cells are as efficient as prime cells, produce just as much power, but are discarded if the reverse voltage tests too low. When discarded, the energy used to make those cells is lost. Even worse, they are often melted down to start over in making a new cell.

The idealPV technology permits cells with very low breakdown voltage to be used at full efficiency. Thus, these so-called “non-prime” cells may be used in producing full power panels at a greatly reduced cell cost. Think of them as “zero carbon cells.” Though these cells are mostly made in Asia, the carbon produced “there” has a warming impact “here.”

idealPV has patents pending in the United States and throughout Europe. Further patent applications are planned. idealPV is committed to no foreign competition for its franchisees, and limited franchise territories.

The economics of CLGP are self-sustaining. Two years of power, production from one panel pays for another panel, i.e., doubling every two years. Were the panels made available to the panel laborers at cost, a panel would cost less than two days labor, but the worker would save twenty days worth of labor over the lifetime, thus a 10X return.

The distributed CLGP model is designed to express the economic power of the technology as more local employment and increases in household disposable personal income. The local supply chain and economic activity multiplies regional economic output. This expands market demand making CLGP and idealPV self sustaining. CLGP utilizes public/private funding to achieve critical mass of economic output above which the program is self-funding.

In comparison, the centralized outsourced model is designed to concentrate economic benefits to individuals and entities controlling low cost labor by extracting economic activity from the markets served. This approach decreases economic output within the target market ultimately depressing its demand. **In renewable energy, the outsourced model is built on capturing government subsidies and is therefore not sustainable.**

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