



# ATLAS GLOBAL

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Energy Solutions



\* Based on a report from in GTM Research and the Solar Energy Industries Association's (SEIA) released 9/2017.





## On The Sunny Side

Some of the benefits of going solar have always been —

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Protection (and savings) from rising electric rates

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Independence from the power system

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Equity in your home – solar adds to your home's value (home values rise an average of \$20 for every \$1 reduction in annual utility bills, and homes with solar tend to sell faster)

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Clean, renewable energy that's good for the environment

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But in the last few years, the cost to go solar has fallen dramatically. Between 2008-2015, the cost of solar PV (photovoltaic) panels has fallen more than 50%. This has been game changer for many families.

Additionally, at this time, the Federal government offers 30% income tax credit, which can be used to further offset the cost of the system. More about that later!





# The Big Picture

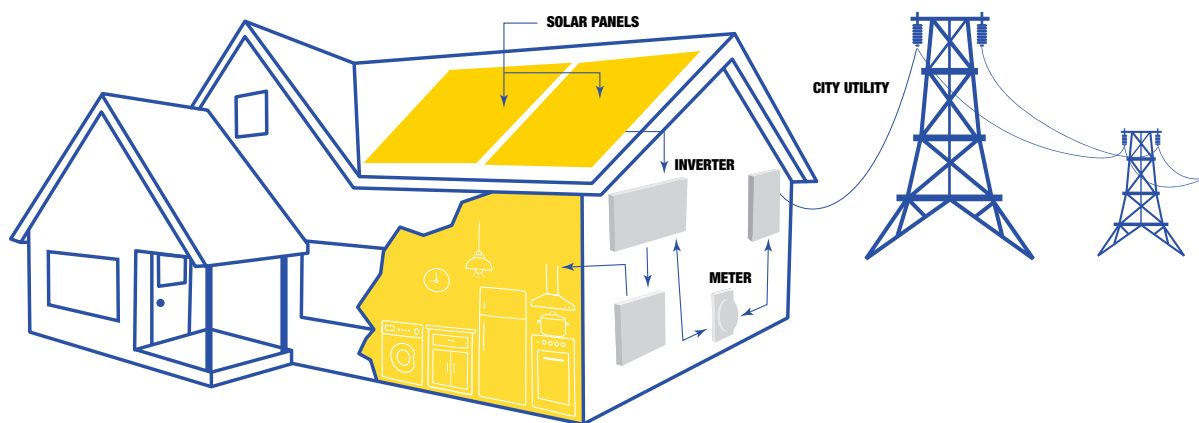
So what should you know/think about to decide if solar is right for you?

Here are some of the most common questions.

## Q. *Just how does solar work?*

# 1

- A. It's surprisingly simple and safe! The key "active" component in a solar panel is silicon, a 100% natural material, which converts sunlight into DC current electricity. That electricity is fed into an inverter, which converts the DC current into AC current. The cables on the panels are fed into your attic and "bundled," then one "rope" of cables is attached to your electricity meter. You use the power you need, and any excess power is fed back to the main electric grid, and you will be credited for it.



At AGES, we use "micro inverters." This means that a small inverter is built into every solar panel (vs. all the panels being hooked up to one inverter.) This way, if one panel has a problem, like shade, only that panel is affected, and the rest of the system continues working.

## Q. *Are all solar systems the same?*

# 2

- A. Yes and no! The types of panels and "support" materials (inverters, racks) are the same from house to house. But the layout of the panels and the number of panels will vary, again based on your lifestyle/electric usage, the design of your home and your budget for solar. AGES Solar designers will prepare a layout specifically for your home and review it with you.



### **Q. *Is there an average size/price for a residential solar system?***

- A.** The average residential solar system is 9,000 watts – but we have installed systems from 4,000-29,000 watts. In 2016, the average homeowners paid \$20-\$40,000 for a system (after the Federal Tax Credit), but there are variations by state.

### **Q. *Can I make 100% of the electricity that I need?***

- A.** Many of our customers do make enough electricity to meet all of their needs – and then some! But again, your home's design will impact this. We may only be able to install a certain number of panels based on the layout of your roof or budget. But you will know in advance how much electric consumption will be replaced by your panels.

### **Q. *Can I store my excess electricity to use later at my home?***

- A.** Yes! In most cases, your excess energy will be stored in the grid in the form of a credit. When you make more power than you need, you bank credits. When you make less than you need, you withdraw credits. This is called net metering, and it's available free through your utility company.

In some extreme circumstances, homeowners sometimes want to store power in case there is an emergency. Batteries are a great option for these cases, and we can guide you to the right solution for your needs.

### **Q. *Will my system work on cloudy days?***

- A.** Yes. Even on a cloudy day your panels will produce electricity. They just produce MORE electricity on bright sunny days. When our AGES Solar team prepares an estimate for you on how much power you can expect from your system, they use three years of National Renewable Energy Association weather data for your location. So a certain amount of cloudy days are factored in!

### **Q. *What do the panels look like?***

- A.** AGES uses a black-on-black panel system and a clean racking system that is "skirted" so you can't see under the panel. These features give our system a sleek look that appears to be part of the home rather than an ugly retrofit. Plus we work with you on the design to maximize any aesthetic concerns you have.



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**Q. How much can I save?**

- A.** The typical homeowner saves tens of thousands, but that will vary based on your home and lifestyle. For instance, your electricity use may be very different from your next door neighbors. (You have three school-age children, while they are a retired couple who travel frequently...)

Our Solar designers are able to look at your electric usage and your home's design, then show you different options for a solar system designed just for you– with very specific estimated savings. (When we prepare a proposal for you, we ask to have 12 months of past electric bills if possible; this gives us a clear picture of your energy usage.)

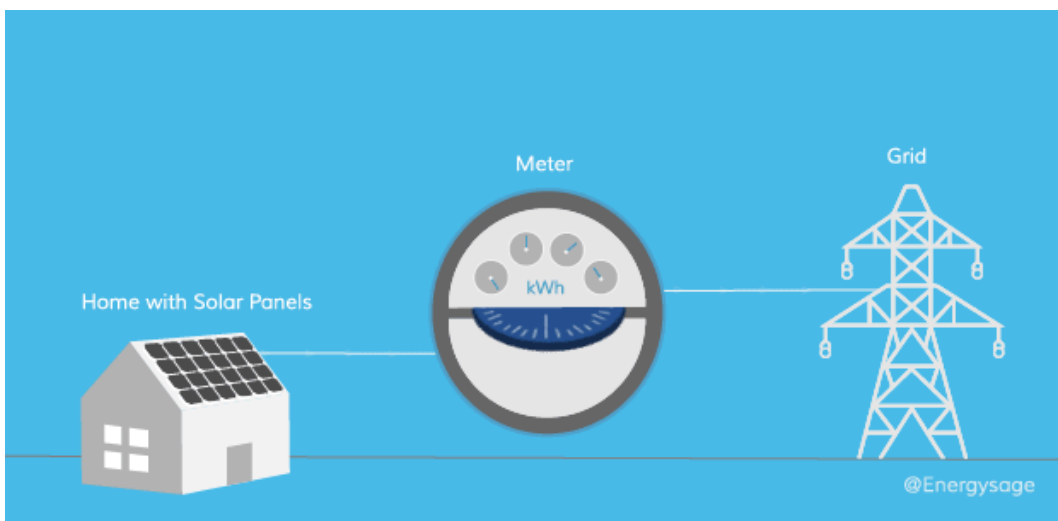
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**Q. Can I "sell" my excess power?**

- A.** Yes, but not for actual cash! The process is called net metering. The amount of electricity you provide to the grid will be deducted from the amount you used – and the "net" difference will be your bill. We have seen customers in California who have actually ended up paying nothing for the month and carrying over a credit to the next month!

There are some differences in policy from state to state and even from utility to utility. For instance, in California, all new solar system owners will pay for their electricity based on the time it is used – and the cost for electricity used in the evening may be greater than the cost of electricity produced during the day. In some states, homeowners can roll-over their energy credits indefinitely; in other states, energy credits expire at the end of the year.

Your Atlas Global project manager can explain the net metering procedure to you based on where you live and your utility company.



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**Q. Should I add my solar system to my homeowner's insurance?**

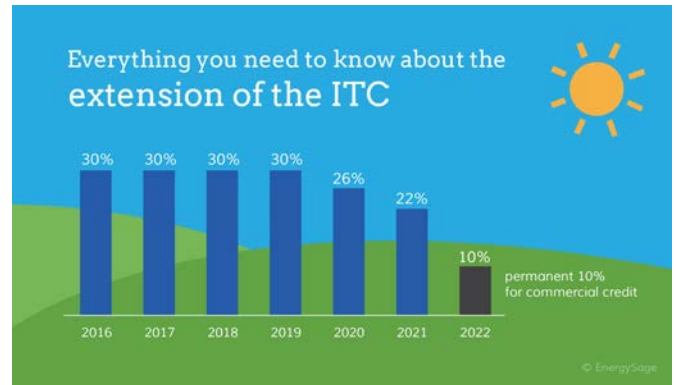
- A.** Absolutely. The increase in premium is very minimal – usually \$0-\$70 per year.



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## **Q. What financing options are available?**

- A.** Of course, you can pay cash for the system, but we also work with several different lenders to make financing available for people with a range of credit scores. Most of our customers choose to finance the system for 10-20 years, with credit above 650.



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## **Q. Please explain how the Federal Tax Credit works?**

- A.** The Federal tax credit is up to 30% of the value of your system. So a \$30,000 system would receive a \$10,000 tax credit. You won't receive cash – but you have two options:
- 1) You can apply this credit to any money you may owe the IRS on your annual taxes; if the amount of the credit is greater than the amount of tax you owe, then you can carry the extra credit over to the next year's taxes.
  - 2) You can apply the total amount of the credit to the cost of the system – and effectively reduce the cost of the system 30%!

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## **Q. What kind of warranty do you offer?**

- A.**
- AGES honors your existing roof warranty.
  - The manufacturer offers a 25-Year warranty for the equipment.
  - AGI Installers provides a 25-Year warranty for the workmanship.





# Our House

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### ***Q. We have an HOA – will that be a problem?***

- A.** In most every state in the USA, HOAs cannot legally forbid or stop a homeowner from installing solar. They can restrict homeowners from putting panels on some parts of the roof – such as the front that is visible from the street. Our team makes every effort to work with your HOA from the start of the process, and we will always provide you with paperwork to submit to your HOA if needed.

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### ***Q. How does my roof, the “design” of my home, or my landscaping affect my solar system layout?***

- A.** First, the more south-facing your roof, the better – that is the most direct sunlight. But a west or east-facing roof can still capture enough sunlight to be cost-effective. But a north-facing roof is a no-no for solar. It just won't capture enough sun to make it worth the cost. So if anyone suggests your install solar on a north-facing part of your roof – get another opinion!

Also, fire codes require a three-foot “set back” around the edges of the system – basically, three feet of open space in the event a fireman needs to be on your roof.

Finally, if your roof is shaded by tall trees, that will reduce the available space for solar panel installation. Panels need to receive as much direct sun as possible.



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### ***Q. What else should I know about my roof and solar?***

- A.** We can install on almost all types of roofs; the only roofs that don't qualify are wood shake roofs. But a system can be installed on a composite shake roof – the most common type of roofing material.

Since your solar system can last for decades, your roof should be in good condition, but it doesn't need to be a new roof by any means.





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## **Q. What's the overall process like?**

- A.** From the day you sign your contract until the system goes to work typically takes four to six weeks, depending on factors like permitting. But there are only a few times that you will need to be at home during this process. AGES assigns a dedicated project manager to every customer; your project manager will tell you exactly what to expect and will schedule all appointments to fit your schedule. *The main stages of your project are:*

**Site Survey** – we inspect the roof and attic, review the electric panels and analyze the internet connection; this typically takes 45 minutes to 2 hours

**Design** – we look at required setbacks, double check to make sure that everything fits as proposed and finalize the proposal for your sign-off and approval by the city

**Permitting** – AGES is required to submit your designs to the city for building and electric permits. Timing to receiving a permit back fluctuates from city to city, depending on the number of permits the city is reviewing at the time. We will also reach out to your HOA if needed to make sure they are on board.

This is also the time that we begin working with your utility provider to secure permission to connect your solar system to your provider. They usually send you tariff and interconnection documents to sign and return. These must be signed before the utility will give us permission to turn on and operate your system.



**Install** – Most residential installations can be done in one day, but a very large project may require a second day. The crew will require constant access to the garage and the attic of the property, and we will need your WiFi username and password to be able to connect your monitoring to your solar system.

**Ready, Set, On!** As soon as we know the system will be finished by the end of the day, we will schedule your city inspections. This typically can take place the day following your installation. All cities require an electrical and a building final inspection. There can be from one to four inspections that must be completed.

If we have permission to operate from your utility provider, we will be ready to turn your system on!

Once your solar system is activated, we will also be sending you credentials for your monitoring software. Enlighten is a great online tool for you to keep up with your systems production. You'll also receive a solar packet with all of your permits, warranty, etc.



**Q. How long will my system last?**

- A.** A long time! Solar panels last and incredibly long time because they have no moving parts. The panels are made of aluminum, glass and silicon, which slightly degrades over time. The manufacturer offers a 25-year standard solar power warranty, which means that power output should not be less than 80% of rated power after 25 years; less than a 1% per year!

**Q. What kind of monitoring tools do you offer after the system is installed?**

- A.** Enlighten is a software that monitors production and consumption – you can view daily, by week, month, etc. It is always available for your use – you can access it from a computer, tablet or your phone. AGI & AGES will also monitor your system to ensure optimum performance.

If your electrical box is compatible, we will also install a consumption meter.

**Q. What kind of maintenance is involved?**

- A.** Solar panels are surprisingly low maintenance. Honestly, in most cases, normal rainfall is enough to keep the panels clean. However if you live in an area with a lot of dust/dirt – or birds mess then a rinse with your garden hose should get the job done.





#### **Q. Can hail or wind damage my system?**

- A.** The solar panels are stronger than your roof and can withstand most normal hail storms. However, in extreme circumstances, Mother Nature can damage the panels, which is why we recommend you add them to your homeowners insurance.

#### **Q. What if I want to sell my home?**

- A.** Your home buyer gets a great deal! Solar adds value to your home, and you are able to recoup your investment when you sell your home. Solar homes also sell much faster than non-solar homes! If there is a remaining balance on the loan it is recommended you add that balance to the price of the home.

#### **Q. What happens if my buyer doesn't want the panels?**

- A.** This is very rare. A relator will not show the home to a buyer if they strenuously object to panels, the same way they would not show a home with a pool to someone who can't swim. Additionally if your realtor can't sell a home with cheaper electricity, then you might consider a new realtor.



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## Q. Why Atlas Global?

A. We hope we have the chance to work with you, and we feel that we're your best choice for a solar partner – for many reasons:

- **Experience** – our team has sold/installed thousands of solar systems, both residential and commercial. Our leadership has years of experience in renewable energy.
- **Established** – AGES is Veteran owned and run by an established management team with a long track record of operating successful, reputable businesses.
- **Full-Service** – AGES has all the resources to provide our customers with everything needed for a successful solar experience, from professional system designers, electricians, installers, site survey and permit project managers, and consultants who can help with financing, ongoing monitoring and more.

