

Thinking *SolSmart*

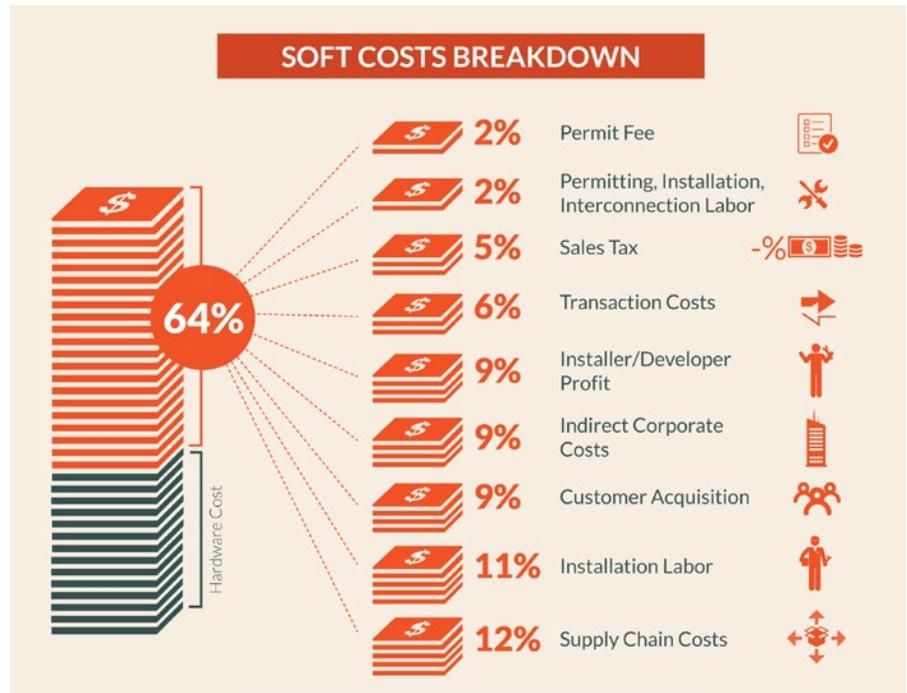
County Strategies for Advancing
Solar Energy Development

JULY 2017

UNDERSTANDING LOCAL BARRIERS TO SOLAR

Since 2008, the amount of solar photovoltaic (PV) energy connected to the electric grid in the U.S. has increased more than 20-fold, as millions of Americans are choosing renewable energy to power their lives. During this time, solar costs have also rapidly declined as a result of technological innovations, commercialization and manufacturing scaling. However, the non-hardware costs – better known as **“soft costs”** – of going solar including permitting, installation, inspection and customer acquisition, have not declined as rapidly. Consequently, soft costs now make up **more than half – 64% – of the total costs of residential and commercial solar systems.**

Soft costs and ‘red tape’ can vary significantly as a result of a fragmented energy marketplace. In the United States, there are 3,069 county governments and 18,000 total local jurisdictions – not to mention 3,000 utility companies – all with different rules and regulations for how to adopt solar technologies. Due to these process



Source: U.S. Department of Energy SunShot Initiative

and market variations, final installation prices of the exact same solar equipment may vary widely across jurisdictions, creating critical barriers to sustained industry growth. Solar soft costs are

then typically passed on to solar customers to pay, ultimately making it more expensive and difficult for residents and businesses in local communities to invest in solar.

GOING SOLSMART

Recognizing that critical local barriers exist is the starting point. To address these barriers, counties can Go SolSmart by taking a variety of steps and best practices to become more solar-ready and advance opportunities for solar development.

SIMPLE STEPS FOR COUNTY OFFICIALS

PERMITTING & INSPECTIONS

- Create a solar permitting checklist that is made available online.
- Reduce permitting processing time and inspections scheduling to 10 days or fewer
- Offer an online process for both permitting submission and inspections scheduling.

PLANNING, ZONING & DEVELOPMENT

- Review zoning requirements and remove restrictions that prohibit solar PV development.
- Integrate solar into relevant local plans (e.g. comprehensive plan, energy plan, sustainability plan).
- Provide clear guidance for solar in historic or special-use districts.

COMMUNITY/UTILITY ENGAGEMENT & MARKET DEVELOPMENT

- Create a solar landing page on the county website with key information and resources.
- Engage or convene an energy task force or solar working group that meets regularly.
- Launch and support a utility-supported community solar program.
- Install solar panels on local facilities.

SOLAR SOFT COSTS NOW MAKE UP MORE THAN HALF—64%—OF THE TOTAL COST OF RESIDENTIAL AND COMMERCIAL SOLAR SYSTEMS.

NATIONAL RECOGNITION AND TECHNICAL ASSISTANCE

Recognizing the importance of reducing local barriers to solar development, the National Association of Counties partnered with The Solar Foundation and an experienced team of partners to launch the **SolSmart program**. Funded through the U.S. Department of Energy's Sunshot Initiative, SolSmart was launched in 2016 to encourage counties and cities to become more solar-friendly by providing high-profile, national recognition to more than 300 solar-leading communities across the country through three tiers of community designation.

Understanding that local government staff time and capacity is stretched increasingly thin, the SolSmart program is here to help and empower communities through **no-cost, technical assistance** in local solar financing, planning, zoning, permitting and inspections from a team of solar and local government experts. Communities pursuing SolSmart designation also have opportunity to host a **SolSmart Advisor**. A SolSmart Advisor is a **fully program-funded, trained solar expert** who will be assigned to work within a community and with local leaders and staff to help accomplish their solar goals and address key steps to achieving SolSmart designation, including: integrating solar into local comprehensive plans and other planning documents; reviewing local solar zoning requirements; and interfacing with community members and stakeholders on solar issues.

WHY SHOULD COUNTIES GO SOLSMART?

INCREASE GOVERNMENT EFFICIENCY

County government staff time and resources are highly valuable commodities. By eliminating red tape and streamlining solar processes, counties can operate more efficiently to **better manage and save staff time, department budgets and taxpayer dollars**.

SPUR ECONOMIC GROWTH AND JOB CREATION

More than one-third of solar installation companies report they avoid doing business in and serving communities due to their permitting difficulties and other local government barriers to solar. Improving the solar onboarding process and becoming more solar-ready allows counties to tap into the rapidly growing solar industry market for business attraction and job creation. **Solar employment has tripled since 2010**. In fact, between 2015 and 2016, jobs in the solar sector grew by 25% - adding 51,000 new jobs into the economy in just one year.

INCREASE RETURN ON INVESTMENT

By removing local barriers to solar, counties can make it more affordable for residents and businesses to go solar and low solar customers to increase their return on investment. Overly complex or poorly defined local solar processes can **add up to \$2,500** to the cost of deploying solar energy systems.



NATIONALLY DISTINGUISHED. **LOCALLY POWERED.**

Visit www.solsmart.org for complete program information and to start your county's path to being SolSmart.

PIMA COUNTY, ARIZ. POPULATION: 1,016, 206

Located in the Sonoran Desert of Southern Arizona, Pima County is host to 350 days of sunshine annually. Given its geography and climate, Pima County has capitalized on the sun as a natural asset and has emerged as a national leader in advancing solar energy. The steps that the county has taken to incorporate solar—including committing to local green building standards, creating incentive zones for solar and streamlining the solar inspection processes—led to the county being awarded the SolSmart Gold designation in July 2017.

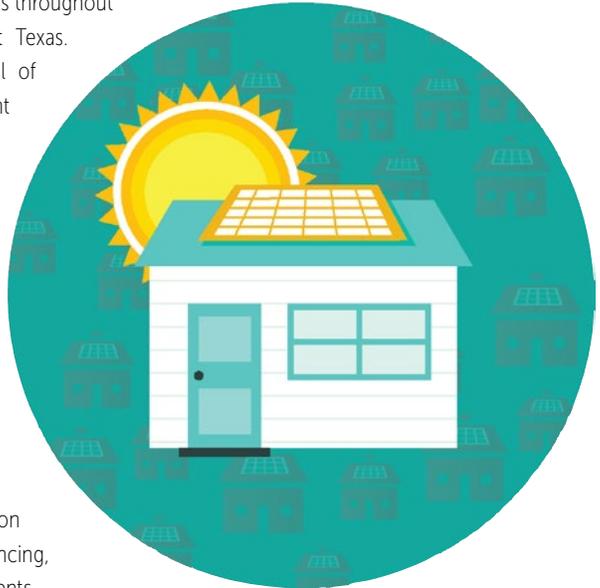


LEADING BY A GREEN EXAMPLE

Solidifying its commitment to boost more energy efficient and sustainable development, Pima County adopted a sustainability resolution in 2007 and established a Green Building Program within its Department of Development Services. As a part of this program, the county adopted the U.S. Green Building Council (USGBC)'s LEED Silver certification as the minimum standard for all new public buildings, which calls for buildings to use at least 10 percent less energy than the USGBC baseline and awards the use of renewable energy. Currently, there are 208 LEED certified buildings in Pima County.

Pima County also works with a network of "Green Rater" partners to directly verify single and multi-family residences for the LEED for Homes designation, which is a voluntary third party certification system of the U.S. Green Building Council (USGBC) that promotes the design and construction of energy and water efficient homes. In fact, Pima County is the only government jurisdiction selected by the USGBC to have this

role and works to certify residences throughout Arizona, New Mexico, and West Texas. Recognizing the natural potential of solar energy to play a prominent role in energy efficient building development in Pima County given its geography, the county launched a Solar One-Stop webpage as a clearinghouse of essential solar information. Used by residents, business owners and solar developers and installers, the site contains a wide variety of key resources including introductory information on solar technology, in addition to resources about solar financing, installation steps and upcoming events.



PLANNING FOR A SOLAR FUTURE

In addition to providing comprehensive educational resources on solar, Pima County is now planning for future development of large-scale solar projects by targeting this development to concentrated areas throughout the county. Known as the Renewable Energy Incentive Districts (REIDs), these districts represent thousands of acres of vacant or underutilized properties suitable for solar facilities. These REIDs can be located through a user-friendly, interactive GIS map feature developed by the county. In an effort to encourage development to the REIDs, Pima County also offers incentives for solar facilities often including reduced or waived regulations and fees, as well as an expedited review time for development plan submittals. **The solar incentive districts serve as a 'win-win' strategy for the county as it encourages large investments in solar, while reducing contested land use issues** by funneling development to just a few properly-suited locations.

VIRTUAL INSPECTIONS

Pima County is geographically large, covering a land area roughly the size of New Hampshire (over 9,000 square miles) with more than a third of the county population living out in unincorporated areas of the county. Given these dynamics, providing traditional county building permits and inspections in a timely and cost effective manner is often a challenge. This is especially the case for smaller inspection projects, such as

solar PV systems. Furthermore, a 2013 economic impact review by Pima County and the Southern Arizona regional economic development agency Sun Corridor, Inc., determined that expediting development approval processes by one month equated to an average annual economic impact of \$25 million to the local economy.

The Pima County Development Services Department, therefore, set out to find an innovative way to make the building inspection process more efficient. Enter the Pima County Remote Inspections Project. Now, using the popular, free video program Skype, contractors and homeowners can now connect with county building inspectors virtually and receive same-day approval on projects. Pima County is now able to review an average of 16 inspections per day and as of February 2017, 20% of all inspections by the department utilized the remote inspections program, indicating the ease and growing popularity of this program. Further, the county notes the remote inspections process has become particularly popular with solar PV system installers.

As a testament to the innovative vision of this program to increase local government efficiency, the **Remote Inspection Project was named a 2017 NACo Achievement Award winner and including as one of the '100 Brilliant Ideas at Work'**—the presidential initiative of NACo President Bryan Deslodge.



“Pima County has for years been proactive and forward-looking on sustainability issues. We adopted the first Sustainable Action Plan for county operations in 2008, and were a leader in establishing Renewable Energy Incentive Districts to promote large-scale solar installations because we recognize the need to minimize our dependence on energy sources that rely on fossil fuels. Through fee waivers and other incentives, we will continue to promote renewable and alternative energy sources in our county operations and throughout Pima County.”

–Sharon Bronson, Pima County Supervisor

SUMMIT COUNTY, UTAH POPULATION: 40,307



As a growing mountain county in Utah's Wasatch Mountain Range, Summit County is a community with a long heritage of both self-reliance and sustainability. The sustainability vision in the county dates back to 1974, when the Summit County Council adopted an energy conservation resolution. Fast forward to the 21st century, and sustainability and renewable energy continue to be championed by county leaders and residents alike, as evidenced by development of both a Sustainability Plan (2011) and Climate Action Plan (2015). Solar energy development emerged in these planning processes as a leading path to achieving county goals of a more renewable, independent source of energy. Summit County's commitment to advancing solar energy is evidenced by operating a successful community solar program, installing solar on county buildings and streamlining the solar permitting process. These actions—among several others—led to Summit County being recognized as a national solar leader by achieving the SolSmart Bronze designation in February 2017.



LOCALLY-DRIVEN LEADERSHIP

Led by a passionate group of community members and supported by local government, Summit Community Solar (SCS) was a successful community solar initiative that launched in 2013. Designed to increase residential photovoltaic (PV) solar in Summit County, this grassroots initiative combined a robust community engagement and outreach effort with both the financial benefits of bulk solar purchasing and the ease of contractor pre-selection. After initial success and increasing interest, the rebranded Mountain Town Community Solar (MTCS) program succeeded SCS in 2016. Summit County and the town of Park City, in partnership with regional nonprofit Utah Clean Energy, have supported operational funding for both programs.

The strategic vision behind the SCS and MTCS community solar programs was to increase the interest and commitment of residents to go solar through a citizen-driven solar outreach campaign, consisting of a public workshop series and distribution of educational resources. Through the bulk purchasing discount arrangements—roughly 30-35% less than the national average residential solar price—an even greater incentive for a 'neighbor-to-neighbor' peer marketing network was created because the shared one-set price of each solar installation decreased as the number of homeowners participating increased. Couple this with the fact that **just 4kW of solar can cut the average Utah homeowner's energy costs in half**, the prospect of substantial yearly energy savings emerged as an extremely attractive incentive for residents in Summit County.

Solar PV provides a variety of benefits to local governments, businesses and residents including: new jobs, improved air quality and public health, stabilization of a portion of electricity costs and abundant energy from one of the ten sunniest states in the U.S."

—Roger Armstrong, Summit County Council Member



Source: Summit County

SIMPLIFY & STREAMLINE

To help simplify the solar process, program leaders launched a competitive bidding process and selected Alpenglow Solar to serve as the pre-selected contractor for its solar streamlining initiative. This saved homeowners from the often-confusing and burdensome process of bidding and selecting the appropriate solar contractor on their own. Summit County helped further streamline the process in 2013 by expediting the permitting process and waiving permitting fees for all residential and business solar systems. This, combined with in-depth solar plan review training for county staff, led to approvals for as many as seven solar permits in just one hour, per Summit County Sustainability Manager Lisa Yoder. Summit County also created a user-friendly one-stop webpage containing comprehensive information on the county solar installation processes, which remains useful for both interested residents and solar contractors, alike.

SHINING SUCCESSES

Summit Community Solar, 2013:

330 kW of installed solar on *60 properties*

Mountain Town Community Solar, 2016:

780 kW of installed solar on *110 properties*

SELF-RELIANT SOLAR LEADER

In addition to encouraging residential solar growth and staying true to its community heritage, **Summit County has sought to lead by example by installing solar energy systems on county buildings.** In 2013, the county partnered with Rocky Mountain Power to install a 71 kW of solar on the county health department building. This solar array is now producing about 250 kwh of energy per day and providing one-third of the building's total electric supply. The county "brought renewable energy to life" by installing a real-time, digital information kiosk in the health center lobby to directly track solar energy being generated.

Building upon this project, Summit County furthered its commitment to renewable energy and overall energy cost reduction by installing a 220kW solar system on the Summit County Justice Center in 2015. As is the case with the county health center, this new array will generate 310,000 kWh of energy each year and is now accounting for one-fourth of the building's total energy usage.

A total of four more solar arrays are in the pipeline to be installed on county buildings through 2019, totaling an additional 207 kW of solar capacity.

INYO COUNTY, CALIF

POPULATION: 18,144



A RURAL ASSET

While Inyo County is California's second largest county by land area, it has the lowest population density of any county in the state at less than 2 people per square mile. With more than half of the county land area encompassed by Death Valley National Park (the lowest point in North America) and Mount Whitney (the highest point in the contiguous U.S.) on its eastern border, the county is home to a range of physical extremes. Inyo County leaders have begun to utilize its physical geography and natural assets for renewable energy development, capitalizing on its rural competitive advantage.

CHARTING A SOLAR ROADMAP

Inyo County has focused much of its renewable energy planning and development work on advancing solar energy, taking advantage of its abundant, year-round sunshine. Inyo County began to chart its path by developing its Renewable Energy General Plan Amendment (REGPA), which received the "Planning Award of Merit for Green Community Planning" from the American Planning Association California Chapter in 2015. The REGPA identified several Solar Energy Development Areas (SEDA) where large-scale solar energy facilities are

suitable, basing determinations on site studies and environmental reviews, and streamlined future permitting within these SEDAs.

The plan also called for increased small-scale solar, in which the county deployed a robust program—with support from the U.S. Department of Energy's Solar Roadmap program—to encourage solar deployment and energy efficiency for residents and businesses. The county expedited the permitting process for small-scale solar systems, in addition to passing a solar-friendly zoning ordinance, which includes solar by-right zoning.



Inyo County Supervisor Jeff Griffiths(left) accepting their SolSmart Bronze award panel.

SOLAR BY-RIGHT ZONING

Allowing solar installations "by-right" grants the right for property owners to invest in solar energy, regardless of location or land-use zone. Solar by-right ensures that all homes and buildings are able to access and utilize solar on their property without having to request special or conditional-use permits, saving citizens and local governments from added time, costs and complexity the solar process.

SOURCE: WWW.SOLARSIMPLIFIED.ORG



“Through actions such as our expedited permitting process and our award-winning Renewable Energy General Plan Amendment (REGPA), Inyo County is proud to be a leader in solar planning and is committed to making solar development as easy as possible for our citizens.”

—Cathreen Richards, Inyo County Planning Director

RENEWABLE ENERGY, CONSERVATION AND LAND USE

Complete with Death Valley National Park, high Sierra Nevada mountains and the scenic Owens Valley and River, Inyo County boasts a robust variety of natural diversity and beauty. In recognizing the importance of maintaining its renowned natural assets, the county has remained steadfast in ensuring that the development of solar energy systems would not negatively impact its sensitive natural and cultural resources (and their accompanying tourism dollars). Alongside the Renewable Energy General Plan Amendment (REGPA), the county also prepared an environmental impact report to specifically evaluate any environmental consequences.

Community engagement has been an essential piece of the REGPA planning process which includes soliciting comments and developing guidelines for conserving sensitive lands and

avoiding critical alterations to significant viewsheds. The Owens Valley Solar Energy Study was even a specific subject of the REGPA to evaluate solar and conservation in more detail in this area. In completing the study, the county also engaged with the local tribal and agricultural communities to evaluate cultural and economic impacts. This **deliberatively public process is viewed as essential to the success of the plan** overall, and the county notes little land use controversy and no lawsuits challenging the project to-date.

UTILITY ENGAGEMENT

Inyo County also has had success in engaging the two utility companies operating in the county. In cooperation with Southern California Edison (SCE), the county has sought to create an Energy Efficiency Revolving Loan Fund program and is currently seeking implementation funds. A partnership with the City of Los Angeles Department of Water and Power is also ongoing in order to further incentivize small-scale solar in the Owens Valley, where the Los Angeles Aqueduct has routed water to Los Angeles from Inyo County dating back to the early 20th century.

BEING SOLSMART

In recognition for these commitments and actions in removing local barriers to and advancing solar energy deployment, Inyo County received the SolSmart Bronze designation in the winter of 2016. Additionally, Inyo County placed second in NACo's 2016 SolSmart County Challenge. These designations further solidify the county as a national leader in solar planning and permitting.

SOURCES & ADDITIONAL RESOURCES

- SOLSMART
www.solsmart.org
- THE NATIONAL SOLAR JOBS CENSUS, THE SOLAR FOUNDATION
<http://www.thesolarfoundation.org/national/>
- NACo WEBINAR: "IS YOUR COUNTY SOLAR READY? REMOVING LOCAL BARRIERS TO SOLAR?"
<http://www.naco.org/events/your-county-solar-ready-strategies-removing-local-barriers-solar-energy>

INYO COUNTY, CALIF.

- INYO COUNTY PLANNING DEPARTMENT, ENERGY REDUCTION & RENEWABLE ENERGY PROGRAM
<http://www.inyoplanning.org/ERRE.htm>
- SUPERVISOR JEFF GRIFFITHS; PLANNING DIRECTOR CATHREEN RICHARDS

SUMMIT COUNTY, UTAH

- SUMMIT COUNTY SUSTAINABILITY DEPARTMENT, RENEWABLE ENERGY PROGRAM
<http://www.co.summit.ut.us/653/Renewable-Energy>
- SUMMIT COUNTY CASE STUDY, SOLAR OUTREACH PARTNERSHIP, ICMA
<https://icma.org/documents/solar-case-study-summit-county-ut>
- MOUNTAIN TOWN COMMUNITY SOLAR
<http://mycommunitysolar.org/summit/>
- LISA YODER, SUMMIT COUNTY SUSTAINABILITY MANAGER
- ROGER ARMSTRONG, SUMMIT COUNTY COUNCIL MEMBER

PIMA COUNTY, ARIZ.

- PIMA COUNTY GREEN BUILDINGS PROGRAM
http://webcms.pima.gov/business/doing_business_with_pima_county/green_programs/
- RICH FRANZ-UNDER, PIMA COUNTY GREEN BUILDINGS PROGRAM DIRECTOR
- SHARON BRONSON, PIMA COUNTY SUPERVISOR







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