

Solar Energy Prosperity in Every Iowa County

Energy is as ever-present in the lives and work of Iowans as corn, conversations about the weather, and a can-do attitude.

Prosperity hasn't been quite so predictable, however, despite the corn, weather, or can-do attitude. But the 21st century energy world is providing very real opportunities for local investment, job creation, and keeping major energy dollars at home in every community and county in the state.

We call this opportunity energy prosperity, and locally-owned solar is the largest piece of that opportunity. 2019 is a year of peak solar potential, but also a time for vigilance. If we're not careful, the promise of solar energy prosperity throughout Iowa and for generations may fade into the great Iowa sunset.

It's a year of peak opportunity because solar prices have been dropping for a decade, quality Iowa contractors cover most of the state, and solar tax credits are still in full effect. NOW is a very good time for local governments, institutions, farms, businesses, and homes to start the process.

Non-taxable entities such as local governments can utilize the tax credits only indirectly. We have developed [a resource page to help](#)¹, including good examples in Iowa. The future of the Iowa solar credit is uncertain, but the federal credit is slated to begin phasing down from 30% this year, to 10% by 2022. It still may be a good deal for farms and businesses then, but why wait?

2019 is also a year for peak vigilance, however, because it appears the investor-owned utilities MidAmerican and Alliant will attempt to overturn net metering either in the legislature or at the Iowa Utilities Board. Net metering allows solar owners to feed surplus power production into the grid, and withdraw the same amount of power when needed: a kWh for a kWh, at the same value.

Without net metering, solar becomes economically non-viable for many customers, because the utility wants to pay 3-4 cents for each kWh the customer feeds into the grid, then turn around and charge the same customer 10-15 cents for each kWh they use. Not exactly a fair shake for the customer, but a great deal for the shareholder/investors of the utilities.

Fairness, though, is also the argument used by utilities around the country when attempting to do away with net metering. Electricity prices include a bundle of costs, including energy but also infrastructure such as poles, wires, and transformers. So if a solar owner doesn't buy as much electricity, the argument goes, they're also not covering their fair share of the infrastructure costs. This theoretically requires non-solar owners to "subsidize" solar owners.

¹ <https://energydistrict.org/resources/solar/solar-resources-for-local-governments/>

There are a number of problems with this argument. One is that grid benefits don't flow only one way. Yes the utility provides multiple benefits, but the solar owner also provides a bundle of benefits when feeding power to the grid, including energy, capacity, avoided transmission cost, and voltage and frequency regulation.

States like [MN have analyzed this trade](#)² through "value of solar studies" and have found that, on average, the total value of the solar energy provided by solar owners is equal to or greater than the utility's retail electricity rate. This means net metering is more often than not a good deal for the grid and for other customers. It also suggests the real objection from investor-owned utilities might come more from lost profits on lower overall sales than from "fairness" issues between customers.

Another problem with the "cross-subsidization" argument is that utilities, like most infrastructure, already operate to a large degree on shared costs and benefits. Rural customers of a given utility pay the same rates as urban customers, for example, yet require much more distribution infrastructure. Nobody is complaining about cross-subsidization there.

Roads are a similar example familiar to local leadership throughout the state. We pay the gas tax and registration fees, but also realize nobody pays *exactly* their share. Someone is always "subsidizing" someone else, but in a shared system, we all recognize the importance of infrastructure for shared prosperity.

The grid is a similar shared infrastructure, and fair access on fair terms is critically important to shared energy prosperity long into the future. Just how big is the opportunity?

Winneshiek County is a non-metro Iowa county, with total population around 20,000, including a county seat of around 8,000. Over the past few years the solar market has grown from one contractor to six, and seen over \$10 million invested in hundreds of customer-owned solar systems. This investment creates between a half and one million dollars of energy value that remains in local pocketbooks every year. This is just the tip of the opportunity iceberg of local solar energy prosperity.

Consider that Iowa has enough capacity on rooftops alone to generate up to 20% of our annual electrical energy needs. With local ownership, this would represent over a billion dollars of reduced electricity purchases remaining in those pocketbooks and communities every year. It also means hundreds of thousands of Iowa homes, farms, businesses and institutions are becoming "energy entrepreneurs" by investing in local contractors, communities, and their own future.

This opportunity for solar energy prosperity is especially strong for Iowa farmers. Farms generally have plenty of siting options, including the roof of livestock facilities or space for ground mount systems. They have significant demand for power, and as businesses they have the ability to take advantage of both

² <https://ilsr.org/wp-content/uploads/2014/04/MN-Value-of-Solar-from-ILSR.pdf>

tax credits and depreciation (note, the 2017 federal tax bill [increased bonus depreciation to 100%](#)³ for qualified property through 2022). Every farmer should have the option to become a solar energy entrepreneur.

Getting from here to 20% locally-owned solar would represent major investment over a generation or more, spread through every county and community. For an Iowa county with population of 10,000, this could mean over \$50 million of investment, and generate energy worth over \$85 million during the 25-year warranted system lifespan. This is possible and very cost-effective today, with incentives and net metering. With storage technologies advancing rapidly, there is no reason to stop at 20%.

And here's the real power of solar energy prosperity: it is possible *everywhere*. Compared to large-scale, utility-owned wind (which is important, but very different), distributed solar generation = distributed ownership, distributed investment, distributed jobs, distributed wealth creation, distributed resilience, distributed stewardship. Those are the investments that will keep ever-growing amounts of energy wealth in the pocketbooks and on the balance sheets of Iowa farms, homes, businesses, institutions, and local government.

How to get from here to there? Be proactive, and be vigilant. On the proactive side, much can be done to kick-start markets, from local governments and institutions investing in solar, to [starting a local energy district](#)⁴, to supporting the [state solar energy tax credits](#)⁵. On the vigilant side, beware of efforts to undo net metering and tax credits at the state level. Encourage your local municipal utility or rural co-op to support both.

There certainly are options to fine-tune net metering, and there is experimentation happening within some of the more innovative consumer-owned utilities such as municipals and co-ops. But any proposal coming from the investor-owned utilities, whatever the language or spin, is very likely to represent a steady closing of the door of solar energy prosperity for Iowans in order to protect profits for out-of-state investors.

The utilities are granted monopoly distribution service territories for good reason – we don't need duplicate sets of poles and wires crisscrossing cornfields and communities, and we do need the good men and women on the lines and in the offices doing a great job keeping the lights on through all kinds of Iowa weather.

Utilities should not, however, be granted a monopoly on profitable clean energy investments. That "first monopoly" for investment and energy entrepreneurship ought to remain with customers, communities, and counties. Iowa's grid must remain "open for business" in the 21st century.

³ <https://www.energy.gov/savings/modified-accelerated-cost-recovery-system-macrs>

⁴ <https://energydistrict.org/services/leading-the-energy-district-movement/>

⁵ <https://programs-taxcredit.iowa.gov/Solar/Dashboard/External>

Energy costs have been like a giant sucking sound, draining financial resources out of Iowa counties and communities year after year. With supportive policies and strong local leadership, we can turn that sucking sound into the giant churning sound of locally-owned solar energy prosperity for generations to come.

That's powerful, and it's the right thing to do. Let's get to work.

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