

TANK MIX

THE ISSUE 13 COMPANION

THE SOLAR BOOK

Three routes into solar farm vegetation work. Who to call, what to say, what they will ask you and what it takes to say yes.

HOW TO USE THIS

Page 2 takes ten minutes and tells you if this is even worth your time. Do that first. If there is no solar near you, close the book and go fly corn.

If there is, page 2 points you at one of three routes. Read your route. Skip the other two. Everything after that is scripts, checklists and the answers to what they will throw at you.

No theory in here. Every page is something you do or something you say.



START HERE

Ten minutes. Then you will know.

1 Open the map

Go to eerscmap.usgs.gov/uspvdb/viewer. Free government map. Every ground mount solar site in America over 1 megawatt, with the owner's name on it.

2 Draw your radius and count

However far you will drive a trailer. Sixty miles, ninety, whatever you already do. Count the sites inside it. Write down the owner name and the acres for each one.

3 Read your number

SITES IN RANGE	WHAT IT MEANS	YOUR ROUTE
0	There is no work here. Close this guide. Do not drive three hours for one site.	None
1 to 5	Enough for a shoulder season, not a business. Go direct to the owner. Do not spend a dime on prequalification yet.	ROUTE A
6 to 20	Real money. Worth building the paperwork for. Go direct first, then get inside a prime.	A then B
20+	This can be a second business. Build the full compliance package and chase all three.	A, B and C

BEFORE YOU CALL ANYBODY, QUALIFY THE SITE

Pull the site up on satellite view. Five questions. Three yes answers or better and it is worth a call.

- ☐ Can you see green growing up between or under the panel rows?
- ☐ Is there brush or volunteer trees on the fence line?
- ☐ Is there slope, ditch or wet ground a mower would struggle with?
- ☐ Is the site over about 20 acres?
- ☐ Is it within your normal drive?

If the panels are sitting on clean gravel with nothing growing, somebody is already doing the job. Move on.



THE ROUTES

Three ways in. Pick one.

They are not equal. One is fast and small. One is slow and steady. One is slowest and biggest. Start where your paperwork lets you start.

	ROUTE A The Side Door	ROUTE B The Sub	ROUTE C The Bid
Who you call	Community solar owner, direct	The O and M provider or the vegetation prime	Nobody. You answer a posted bid.
What you need first	Insurance, license, a truck	ISNetworld, pollution liability, safety plan, EMR	All of Route B, plus bid writing
Time to first job	4 to 8 weeks	2 to 4 months	3 to 6 months
Site size	5 to 40 acres	100 to 2,000 acres	Varies, often multi site
Upside	Fast yes. Nobody gatekeeping.	Repeat volume. They feed you work.	Biggest single checks. Multi year.
Downside	Small checks. One site at a time.	Months of paperwork before a dollar.	You may lose. Bids are a numbers game.
Best for	Everybody, first	The guy who already has commercial paperwork	The guy who wants this to be the business

DO NOT SKIP TO ROUTE B

Every operator wants to go straight at the big prime with the 2,000 acre site. Then he spends four months and eleven hundred dollars on prequalification, gets in, then finds out he has never sprayed a solar site in his life and has nothing to point at.

Land one small site first. Even a cheap one. Then you walk into the prime with photos, an acre count and a reference. That is worth more than any safety binder.



ROUTE A

The Side Door

Community solar. Sites of 5 to 40 acres. The owner is small enough to answer his own phone and the vegetation budget is his own problem.

- 1 Find them.** On the USPVDB map, the small sites are community solar. Roughly 5 to 10 acres of ground per megawatt, so a 3 MW site is about 20 acres.
- 2 Find the human.** Search the owner name plus "asset management" or "operations" on LinkedIn. You are looking for a title with the words asset, operations, or O and M in it. Not sales.
- 3 Send the proof email.** Not a pitch. A photo. See page 9. Screenshot the overgrowth on their site from satellite view and send it to them.
- 4 Ask for a walkthrough, not a contract.** "Can I come look at it with you" gets a yes far more often than "can I bid on it."
- 5 Bid the gap, not the site.** Quote the fence line, the perimeter, the substation surrounds and the ground their mower cannot reach. Leave the rest alone.

The five to call

WHO	WHAT THEY ARE	WHERE
Nexamp	Number one US community solar. Owns and operates long term with in house O and M.	National
Summit Ridge	216 MW across 80 projects. Their Peoria site is 2.95 MW on 18.92 acres.	IL, MD
Pivot Energy	Around 1,000 completed projects. A 40 project portfolio across 8 states.	National
BlueWave	Agrivoltaics. Farming and solar on the same ground, so they already think about vegetation.	Northeast
US Solar	Community solar gardens.	Minnesota

WHY THIS ROUTE WORKS

These owners are building hundreds of small scattered sites. They will tell you themselves the vegetation budget is thin. And nobody big wants to mobilize a crew for 18 acres.

Small sites are unprofitable for a ground crew and fine for you. Your mobilization is a trailer, not a lowboy.

You do not beat the vegetation prime. You become his drone.

The prime already holds the contract. He already has the relationship, the insurance and the crew. What he does not have is a way to treat the ground his mower cannot reach without putting men on backpacks in 95 degree heat.

THESE TAKE SUBS

Omniadian

Actively builds a field service partner network. Best door in the industry. Their VP has said mowing budgets can equal or exceed preventive maintenance budgets.

Reinhart Services

Central Illinois, four state Midwest. 200 to 500 acre sites.

Offers white label subcontracting, which means you fly, they invoice.

THIS ONE DOES NOT

KerTec

Does everything in house with no subcontracting. Good outfit. There is no door. Do not waste the email.

Knowing where the wall is saves you a week.

The others worth an email

WHO	THE ANGLE
SOLV Energy	O and M for 17 plus GW. Vegetation is on their service list.
NovaSource	World's largest solar O and M. Their standard program is one pre emergent spray plus two to four mows. You want to be that spray.
Lanracorp	48 states. Already flies drones for survey but not spray. Point that out to them.
Fescue Management	Already flies drones for seeding. They understand the aircraft, so you skip the whole explanation.
VegClear	Southeast. Backpack crews and ATV booms. That is exactly the labor you are replacing.
Kellis	Alabama and Southeast. Advertises solar from 1 acre to 5,000.

THE ASK THAT WORKS

Do not ask for their contract. Ask for their **problem acres**.

"Which parts of your solar sites are the worst to treat? The steep ground, the wet ground, the stuff under the fence. I will take those. You keep everything else and you invoice the client. I never touch your customer."

That is not a competitor talking. That is a tool he can hire.



ROUTE C

The Bid

Slowest, biggest, most paperwork. Do not start here. But set the alerts today so the work finds you while you work Routes A and B.

Set these three alerts this week

WHERE	SEARCH THESE TERMS
SAM.gov sam.gov/ opportunities	solar vegetation, vegetation management, herbicide application, noxious weed control
BidNet Direct bidnetdirect.com	Same terms. This is where state, county and municipal work posts.
FindRFP findrfp.com	Renewable energy category.

What disqualifies you before they read a word

X No prequalification on file

X Insurance limits below what the solicitation states

X No pollution liability

X Wrong applicator category for the state

X Missing EMR or OSHA 300 logs

X Late. They mean the minute, not the day.

THE REAL REASON TO WATCH BIDS

Even the ones you lose tell you something. A posted solicitation names the site, the acres, the scope and often the incumbent contractor.

That is a free list of exactly who is holding the work you want. Lose the bid, then go call the winner about subcontracting. That is Route B with a warm lead.



Six sideways ways in

The front door is crowded. These are not.

1 Sub to the sheep guy

A solar grazer already has the contract, the relationship and the gate code. What he does not have is a spray license or an aircraft. He still has to deal with the bareground, the fence line and the woody brush his sheep will not eat. Find the graziers on the map at solargrazing.org and offer to be his chemical arm.

2 Sub to the mower

Same logic. The mowing contractor is losing money on the steep ground, the wet spots and the strips his deck cannot fit into. He is not your competition. He is your customer.

3 Your own farmer leased the ground

Go through your customer list. Somebody you already spray for has leased ground to a solar developer, or his neighbor did. He knows the site manager's name. That is a warm introduction you already own and have never used.

4 The proof pitch

Do not pitch. Show. Pull the site up on satellite, screenshot the overgrown section and send it to the asset manager with three sentences. You have handed him evidence of a problem he is being paid to prevent. That email gets opened.

5 Catch it before it is built

New sites need bareground treatment before the panels go in and before commissioning. That is the EPC contractor, not the O and M provider. Completely different phone call, far less competition. Watch county permitting records for new solar construction.

6 Buy the first one

Take one small site at your cost. Photograph everything. Get the acre count, the before and after and one sentence of a reference. You are not buying a job. You are buying the thing that gets you every job after it.



DIRECTORY

Everybody, on one page

WHO	WHAT THEY ARE	TAKES SUBS
Omnidian	Asset management and O and M. Builds a partner network.	YES
Reinhart Services	Vegetation prime, Midwest. White label.	YES
SOLV Energy	O and M, 17 plus GW.	Ask
NovaSource	Largest solar O and M in the world.	Ask
Lanracorp	Vegetation prime, 48 states. Drones for survey only.	Ask
VegClear	Vegetation, Southeast. Backpack and ATV.	Ask
Fescue Management	Mowing and seeding. Already uses drones.	Ask
Kellis Vegetation	Vegetation, Alabama and Southeast.	Ask
KerTec	Vegetation and grazing. All work in house.	NO
Nexamp	Community solar owner. Direct call.	Direct
Summit Ridge	Community solar owner. IL and MD.	Direct
Pivot Energy	Community solar owner. National.	Direct
BlueWave	Community solar owner. Agrivoltaics.	Direct
US Solar	Community solar owner. Minnesota.	Direct

The owners behind the primes

You will not sign with these. Know the names so you can work out who holds their vegetation contract, then go call that contractor: **NextEra Energy Resources, Clearway, Silicon Ranch, Cypress Creek, Lightsource bp, Enel North America, Leeward, Origis, EDF Renewables, Invenergy, AES, Brookfield** and **BayWa r.e.**

THE ONE FACT THAT SHOULD MAKE YOU MOVE

We went looking for a big incumbent vegetation contractor who sprays solar sites with drones.

We could not find one. Lanracorp flies drones for survey. Fescue flies them for seeding. Nobody on that list is flying herbicide.

The only people doing this work are dedicated spray drone operators. That is who you are competing with. There are not many of them.



WHAT TO SAY

Copy these

THE PROOF EMAIL to a community solar owner. Attach the satellite screenshot.

Subject: Vegetation on your [TOWN] site

I pulled your [TOWN] array up on satellite this week. Attached. You can see the growth coming up through the rows on the north end and the brush along the west fence.

I run a licensed Part 137 aerial application business out of [TOWN]. I fly herbicide by drone on the ground a mower cannot reach. Fence lines, gravel, perimeter, substation surrounds, steep and wet areas.

Not pitching a replacement for your mowing or grazing. Just the part it cannot get to.

Who handles vegetation contracting for your [STATE] sites?

THE SUB EMAIL to a vegetation prime or O and M provider.

Subject: Drone subcontractor, solar vegetation

I fly a [T40 / T50 / whatever] on herbicide. Part 137, [STATE] licensed, insured.

I am not looking to bid against you. I am looking to take the acres your crews hate. Steep ground, wet ground, under the fence line, the strips a deck will not fit into.

You keep the client and you invoice. I never contact your customer.

Do you have a subcontractor packet?

THE PHONE OPENER

"I am not going to tell you a drone can do your whole site. It cannot. It does not go under the panels. What it does is the fence line, the gravel, the perimeter, the substation surrounds and the steep wet ground your mower has been failing on. Can I come walk it with you?"

THE VOICEMAIL fifteen seconds. Do not pitch.

"[NAME], this is [YOU] out of [TOWN]. I sent you a satellite photo of the growth on your [TOWN] array. Just want two minutes to tell you what it would take to clean it up. [NUMBER]."



OBJECTIONS

What they will throw at you

Learn these seven. They are the whole conversation.

"Can a drone even get under the panels?"

No. It cannot. Say that first, say it fast, then watch their shoulders drop. Then tell them what it does do. The operator who admits the limit is the only one they believe about anything else.

"We already have a mowing contractor."

"Good. I am not replacing him. Ask him which parts of the site he hates. That is what I am quoting."

"We use sheep."

"Sheep are cheaper than me on the green cover, so keep them. They will not eat the woody brush on your fence line and they will not touch your gravel bareground. That is what I am quoting."

"Are you on ISNetworld?"

If yes, give the number. If no, **do not bluff.** "Not yet. I am starting the process. If you can tell me your requirement I will have it done before I bid." Bluffing this gets you blacklisted.

"What is your EMR?"

If you have no employees you likely have no EMR. Say exactly that. "I am an owner operator, no employees, so I carry no experience modifier. Here is my general liability and my pollution liability." Do not invent a number.

"Is that even legal? Spraying from a drone?"

"Yes. Part 137 certificate from the FAA, plus my state applicator license in [category]. Same rules a crop duster flies under. I will send both."

"What happens if you drop it on a panel?"

"My hull and liability policy covers it. Here are the limits." **Have this answer ready before you make the first call.** If you cannot answer it you are not ready to sell this work.



What you need, what it costs

Route A needs the top half. B and C need all of it. Tick what you have.

WHAT	WHY	ROUTE
☐ Part 137 certificate	You have it. It is the whole reason you can do this work.	All
☐ State license, right of way or industrial vegetation	Your ag category does not cover solar. Solar is not agriculture.	All
☐ Aerial category	Most states want this on top of the site category. Two things, not one.	All
☐ General liability, \$1M per occurrence, \$2M aggregate	Baseline. Higher risk scopes want \$2M per occurrence.	All
☐ Auto liability, \$1M	You are driving a trailer onto their site.	All
☐ Aviation and hull	The aircraft itself. Where a dropped drone on a panel lands.	All
☐ Pollution liability, \$1M per incident	The one almost nobody has. Herbicide work triggers it. Call your agent this week.	All
☐ Umbrella, \$2M to \$5M	Common above \$5M project value.	B, C
☐ Workers comp, \$1M	If you have any employees.	B, C
☐ ISNetworld	Around 900 hiring companies screen 90,000 contractors on it. Two to four weeks. Generic safety wording fails.	B, C
☐ Written safety plan with electrical language	Arc flash, lockout tagout, working near live equipment. A farm safety plan will not pass.	B, C
☐ OSHA 300 logs and EMR	EMR 0.8 saves about 20 percent on comp. A 1.3 costs about 30 percent more. Many primes will not hire above 1.0.	B, C

YOUR LICENSE CATEGORY, BY STATE

Ohio Cat 5, Industrial Vegetation. **Tennessee** Cat 6, Right of Way. **Illinois** non crop weed control, three year license \$300. **Texas** TDA right of way and weed control.

Everywhere else, including **California, Indiana, Georgia** and **North Carolina**: generally Right of Way or Industrial Vegetation. Confirm with your state lead agency before you bid. One phone call.



DEAL KILLERS

What kills the job

1 The label. This is the big one.

A drone is an aircraft. If the label prohibits aerial application, you cannot fly it. Does not matter how good the pitch was. Does not matter that the site manager is begging you.

And this is not rare in solar. A lot of the standard bareground chemistry has no clean aerial label. A lot of labels only recognize fixed wing or rotary aircraft and never mention unmanned systems at all.

Glyphosate is a problem. Roundup products generally do not qualify for drone application.

And the volume trap. Even products carrying an aerial label often want a minimum carrier volume near 2 gallons per acre, which runs straight into the ultra low volume work most drone rigs are set up for.

DO THIS: before you bid, pull the label on the two or three products the site is likely using. Read the aerial section. Know the answer before they ask.

2 Prevailing wage

It increasingly attaches to community solar under federal tax credit rules. Minnesota, for one, requires it on gardens over 1 MW.

DO THIS: ask before you quote. If it applies and you did not price for it, you just bought a losing job.

3 Pollinator certification

Eight states have pollinator friendly solar scorecards. Illinois, Maryland, Michigan, Minnesota, Missouri, New York, South Carolina and Vermont. None ban herbicide. But to claim the designation an owner has to limit it. Minnesota's spec says herbicide should be used minimally and only as spot treatment in the first year while natives establish.

DO THIS: ask if the site is certified. If it is, your chemical window shrinks to spot work. Say so in the bid instead of finding out later.

4 Promising the whole site

The fastest way to lose a solar buyer is to tell him the drone does everything. He has walked those rows. He knows it does not go under the panels.

DO THIS: name the limit before he does. It is the single strongest move in this entire guide.



THE BID

How to price it

Solar is not farm work and it must not be priced like farm work. Here is what is different and what it costs you.

Add these to your normal per acre number

WHAT	WHY IT COSTS YOU
Escort and badging time	You do not drive on and start. Site orientation, escort, sign in. Bill the hours or eat them.
Their schedule, not yours	They tell you when you fly, around production and grid constraints. That is a lost day you cannot fill.
Prequalification	ISNetworld and the safety plan cost real money. Spread that across the jobs it wins you.
Pollution liability premium	A policy most farm operators do not carry. It is a line item now.
Damage exposure	You are flying over glass. Your risk per acre is not the same as it is over corn.
Slow, tight flying	Fence lines, substation surrounds and perimeter work are not 300 acre days. Your acres per hour drops. Price on time, not on acres.

For context only, what owners spend today

NREL studied 54 sites. Median herbicide cost, per acre, by ground cover: **gravel \$293, turfgrass \$157, native vegetation \$122, sheep grazing \$75.**

Macknick et al., Sustainability 2023, 15(7):5895. NREL/JA-6A20-85418.

DO NOT QUOTE THAT NUMBER BACK AT THEM

Those figures are whole programs, at sites you have never seen, using crews and mowers. They are context. They are not a rate card and they are not your price.

Bid your cost plus your margin. The solar buyer is not comparing you to a corn field. He is comparing you to a mowing crew that has been failing on that ground for three years.



GO

This week. And every link.

DO THESE FOUR

- ☐ **Tonight.** Open the map. Count the sites in your radius. Ten minutes. This decides everything else.
- ☐ **Tomorrow.** Call your insurance agent and ask one question. Do I have pollution liability, what would \$1M per incident cost me.
- ☐ **This week.** Call your state lead agency. Ask which applicator category covers industrial vegetation or right of way. Ask whether you already hold it.
- ☐ **Friday.** Send one proof email. One. Screenshot the overgrowth, three sentences, send it. See page 9.

Find the sites

USPVDB solar map

Every US site over 1 MW, with owner names. Free.

eerscmap.usgs.gov/uspvdb/viewer

Solar grazing map

Find the sheep guys. Angle 1.

solargrazing.org

Find the bids

SAM.gov

Federal.

sam.gov/opportunities

BidNet Direct

State, county, municipal.

bidnetdirect.com

FindRFP

Renewable energy category.

findrfp.com

The gate

ISNetworld

Two to four weeks.

isnetworld.com

Avetta

The other one.

avetta.com

Takes subs

Omnidian

Best door in the business.

omnidian.com

Reinhart Services

White label. Midwest.

reinhartservices.com

Worth an email

SOLV Energy

solvenergy.com

NovaSource

novasourcepower.com

Call direct

Nexamp

nexamp.com

Summit Ridge

srenergy.com

Pivot Energy

pivotenergy.net

BlueWave

bluewave.energy

ONE LAST THING

Tell them what it cannot do.

Every buyer in this book has been pitched by a drone salesman before. Most of them heard the same promise, that the machine could do the whole site.

It cannot. And they know it cannot, because they have walked those rows.

So be the one who says it first. Then name the fence lines and the gravel and the substation surrounds and the steep wet ground their mower has been failing on for three years.

That is why you get the call back.

Eugen

Tank Mix

Tank Mix is a free weekly for US Part 137 ag spray drone operators.
Find an operator or get listed: agdronedirectory.com