

Solar Irrigation Procurement — RFQ Checklist

Use this checklist to assemble one solar irrigation RFQ that suppliers can price on a like-for-like basis. Solar irrigation is three linked packages: the PV array and drive, the pump and water source, and the distribution network with its buffer storage. Quotes only become comparable once dynamic head, abstraction volume, daily water demand, buffer strategy and grid status are stated in writing.

1. Required information for a comparable quote

- ☐ Country, site coordinates and grid status (no grid / weak grid / grid-tied)
- ☐ Water source: borehole, river, dam, canal or reservoir — with tested yield
- ☐ Static and dynamic head, plus pipeline length to the field
- ☐ Irrigated area, crop plan and growing method (open field, orchard, greenhouse)
- ☐ Peak daily water demand in m³/day and the daily irrigation window in hours
- ☐ Buffer strategy: day-tank, lined reservoir or direct-to-field, and days of buffer required
- ☐ Distribution type: drip, micro-sprinkler, pivot or a mix, with required emitter pressure
- ☐ Water quality analysis, so filtration and disinfection class can be set
- ☐ Whether diesel-genset or battery backup is in scope
- ☐ Delivery terms (Incoterms), port of entry and installation responsibility split

Use the ruled column on the right to record your own figures for each line before sending the RFQ.

2. Planning-grade budget bands (USD)

Band	Typical scale	What moves the price
Below USD 250K	Pilot / demo block, under 5 ha	Below the platform threshold for a structured multi-supplier RFQ.
USD 250K - 750K	Single-source block, 5–30 ha	Dynamic head, borehole yield, filtration class, genset backup, Incoterms.
USD 750K - 3M	Multi-block scheme, 30–150 ha	Reservoir earthworks and lining, booster pressure, disinfection, civil split.
Above USD 3M	Estate / pivot scale, 150 ha+	Peak power vs irrigation window, hybrid energy, water rights, EPC route.

Bands are for budgeting and RFQ preparation only. Real pricing comes from supplier quotations against a defined scope, Incoterms and installation split. Minimum project value for a structured multi-supplier RFQ is USD 250K.

3. Common specification mistakes to avoid

- ☐ Sizing the PV array from panel watts instead of the pump duty point at dynamic head.
- ☐ Quoting pumps without a buffer strategy, so the scheme stalls on overcast days.
- ☐ Omitting the water analysis, leaving filtration and disinfection out of scope.
- ☐ Comparing a supply-only PV price against a turnkey installed price.
- ☐ Leaving civil works — earthworks, lining, pump house, trenching — undefined.
- ☐ Ignoring the abstraction permit and water rights timeline.
- ☐ Specifying peak flow only, with no seasonal demand profile.
- ☐ Buying without a spares, telemetry and O&M scope.

4. RFQ cover sheet — fill in and send

Project name	
Country / site coordinates	
Grid status	
Water source & tested yield	
Static / dynamic head	
Pipeline length to field	
Irrigated area & crop plan	
Peak daily demand (m³/day)	
Irrigation window (hours/day)	
Buffer strategy & days of buffer	
Distribution type & emitter pressure	
Water analysis attached? (Y/N)	
Backup energy in scope	
Scope split (owner / supplier)	
Incoterms & port of entry	
Target budget band (USD)	
Required delivery date	
Contact name & role	

5. Next steps

- Size demand, pump duty point and storage first: seedmatchgroup.com/greenhouse-irrigation-planner and [/pump-sizing-calculator](https://seedmatchgroup.com/pump-sizing-calculator)
- Check diesel-displacement payback: seedmatchgroup.com/solar-roi-calculator
- Read the full band guide: seedmatchgroup.com/solar-irrigation-procurement
- Submit the completed cover sheet as one RFQ: seedmatchgroup.com/rfq

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