Guarantee the Contract, Not the Debt

A payment intermediary for clean power in developing countries

Investors price the risk that a state distribution company will not pay. A payment intermediary buys power under one standard contract, pays generators in full and on time, and collects arrears behind a guarantee waterfall agreed in advance.

Stephen J. Stretton · writing in a personal capacity

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Clean power in developing countries is cheap to build and dear to finance

+80%

cost of the same solar plant at a 12% cost of capital (6.5 c/kWh) against 4% (3.6 c/kWh), stylized

>2×

cost of capital for utility-scale solar in emerging and developing economies against advanced economies

$150bn

a year saved on clean energy financing in these economies if the gap narrows by one point

Solar has no fuel bill, so its price is mostly the cost of the money that built it.

Source: Working paper 3.1, Table 1 ($800/kW, 20% capacity factor, 25 years); IEA, Reducing the Cost of Capital (2024).

The buyer is the risk: long arrears and poor recovery add up to 4 points to the cost of capital

Default episodes per 100 buyer-years	Recovery 30%	Recovery 60%	Recovery 90%
5	+0.9 pp	+0.5 pp	+0.2 pp
10	+1.8 pp	+1.0 pp	+0.3 pp
15 (central case)	+2.6 pp	+1.4 pp (tariff +11%)	+0.4 pp
25	+4.0 pp	+2.2 pp	+0.6 pp

Only two of 39 Sub-Saharan African power sectors were financially viable (World Bank, 2016). Investors charge for long arrears and poor recovery, not for occasional lateness.

Source: Working paper 3.1, Table 2: one-year episodes, base WACC 8%, price of risk 2 (stylized); Trimble et al. (2016).

A payment intermediary pays generators whatever the buyer does, behind a waterfall agreed in advance

One standard contract. The facility buys from every generator on the same power purchase agreement and sells on to distribution companies.

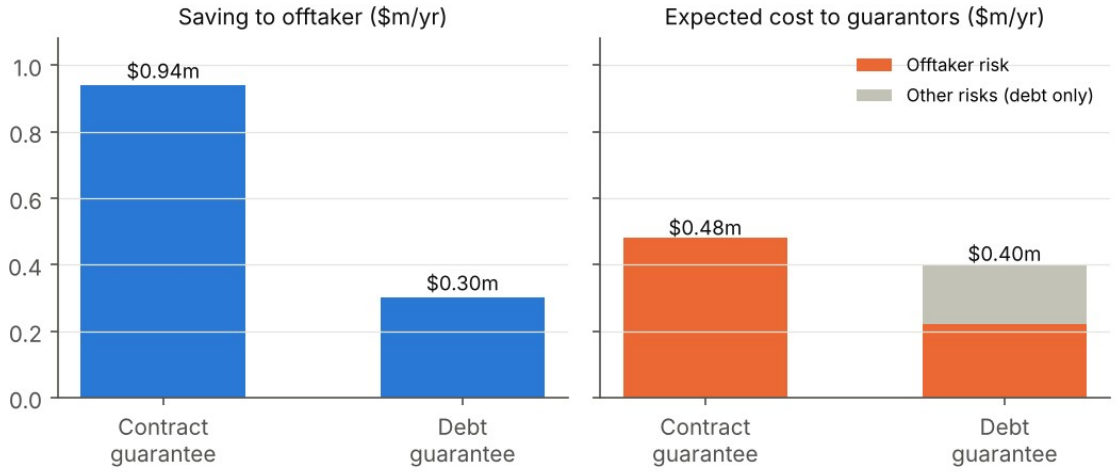
Paid in full and on time. The buyer's arrears become a debt to the facility, a repeat creditor with more leverage than any developer.

The waterfall: distribution company, then its state owner, the national government (intercept of transfers), a multilateral agency, a donor account.

Signed before the first tender, so a crisis runs by contract, and the first calls fall on the governments that control the utility.

Source: Working paper 3.1, Sections 4.4 and 6.1.

Guaranteeing the contract removes the whole premium; guaranteeing the debt removes under a third



Stylized 100 MW solar plant, $ million a year.

Contract guarantee: saves the buyer $0.94m at $0.48m expected cost, about $2 per dollar; worst case a year of bills, $8.7m.

Debt guarantee: saves $0.30m at $0.22m for the same risk ($1.4 per dollar); worst case the $60m loan.

The difference is the claim: the facility keeps its claim on the buyer and recovers 58 cents per dollar, against 39.

Source: Working paper 3.1, Table 3 and Figure 3 (stylized).

The saving is real only if the facility collects better or makes default rarer

With no price of risk and no better collection, the guarantee only moves the expected loss from investors to the state.

Better collection is a real gain: at 80% recovery the saving rises from $2.0 to $3.6 per dollar of expected cost.

Fewer defaults are a real gain: a buyer facing one creditor, letters of credit and reform conditions defaults less often.

The state bears risk cheaply only sometimes: not when the utility and the treasury are in trouble together.

Source: Working paper 3.1, Proposition 2 and Section 5.3.

Most of the expected cost falls on the buyers' owners, little on donors

Layer (stylized 2 GW regional facility)	Pays when called	Expected call, $m a year	Share of payments
State or provincial owner	50%	4.80	2.8%
National government	80%	3.84	2.2%
Multilateral agency	90%	0.86	0.5%
Donor contingency account	100%	0.10	0.06%

Liquidity, not loss, can break the facility: in a 1-in-200 year, 65% of buyers are in arrears together, so it needs a buffer of about $57m, a third of a year's $174m payments.

Source: Working paper 3.1, Table 4 and Proposition 3; correlation 0.3, six-month bridge (stylized).

India's Solar Energy Corporation shows the design works, and that the buyers must be fixed

~60 GW

sold at an average Rs 2.93/kWh on a Rs 0.07 margin; rated AAA (2025)

Rs 90,000 cr

liquidity loans to distribution companies in 2020 so they could pay generators

Rs 1.4 lakh cr

of arrears rescheduled over up to four years from June 2022; Rs 3,330 cr left by March 2026

Letters of credit, a payment security fund and a central-bank debit of defaulting states protect the intermediary. The risk moved to the center; it was not removed.

Source: ICRA (July 2025); CRISIL (May 2020); Power Line (June 2022); PTI (April 2026).

Design the facility so that the risk stays small

Local currency. A dollar tariff hands the state the devaluation risk of every contract, in the crisis when it can least bear it.

Declining tariffs. 7.7 cents falling to 3.9 by year 7 has the present value of a flat 5 cents, with 23% less owed after year 7.

National or regional. Large markets build their own; small states share one, with a stronger multilateral layer.

Reform as the price of entry, and the guarantee recorded at expected cost under a published cap. Small versions already work: Zambia's IDA payment guarantee.

Source: Working paper 3.1, Sections 7–8; World Bank Group, Zambia Scaling Solar (2018).

What to do

What the analysis shows

Premium: a weak buyer adds about 11% to the solar tariff (stylized).

Contract beats debt: the whole premium removed, $2 per dollar of expected cost, a fraction of the exposure.

Condition: real gains need better collection or fewer defaults.

Waterfall: cost falls on the buyers' owners; liquidity is the binding risk.

Actions

Finance ministries: build or join a facility with one contract and a waterfall signed before the next tender.

Regulators: require letters of credit and a path to cost-recovery tariffs.

Development banks and donors: guarantee the facility, not the loans; fund the donor account.