HOW SPARC WORKS

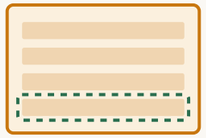
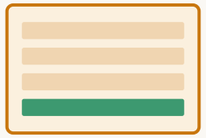
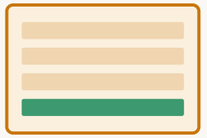
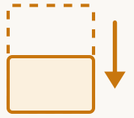
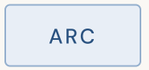
Shifting production, one MWh at a time

A share of an existing contract, delivered by a renewable generator and recorded for every MWh.

AT A GLANCE

Three things happen in step

This deck explains how SPARC works when it is used to gradually reduce fossil fuel output under existing power contracts. A share of the contract is assigned to a renewable generator, the generator delivers it, and every delivered MWh leaves a record.

	BEFORE DELIVERY	AT DELIVERY	AFTER DELIVERY
Contract The fossil PPA	 A share of the PPA is registered as a SPARC stream	 A renewable generator fulfills the stream The fossil plant generates less	 The share stays green For the rest of the contract term
Power Electricity		 Renewable MWh delivered to the buyer Confirmed by the meter	 Less fuel burned For every MWh delivered instead
Records The registry	 Embedded emission right on record Registered with the stream	 One SPARC record per MWh A REC evidences the renewable source	 Unused right issued as ARCs Only after verification

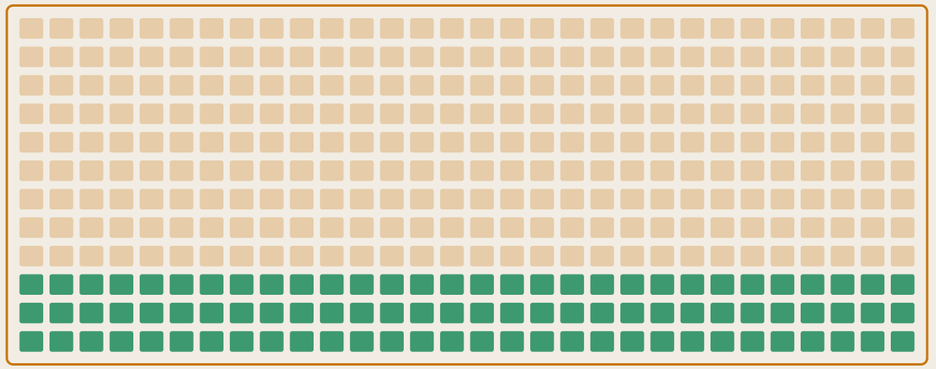
THE CONTRACT

The contract stays. A share of it is delivered differently.

SPARC does not buy out a fossil plant or change its contract. The PPA stays in place, with the same parties and the same terms.

Behind it, the plant operator agrees with a renewable generator to deliver a share of the contracted power, registered as a SPARC stream. The fossil plant, often a coal plant, produces that much less.

ONE FOSSIL PPA, UNCHANGED



Contract start

Contract end

Fossil plant
delivers the rest

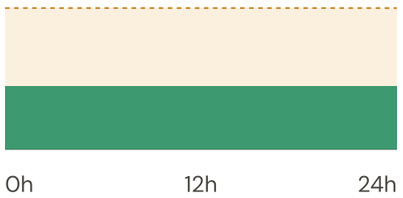
SPARC stream
a share delivered by a renewable generator

STREAM DESIGN

A stream takes the shape the deal needs

A SPARC stream is not one fixed product. It can be 24/7 firm, with the same amount every hour of the day, or 12-hour firm, covering a set window. It can also be shaped, following renewable output smoothed by a small battery.

The shape depends on what the fossil plant operator is willing to trade and what the renewable generator can deliver. The firmer the stream, the more the renewable generator takes on.

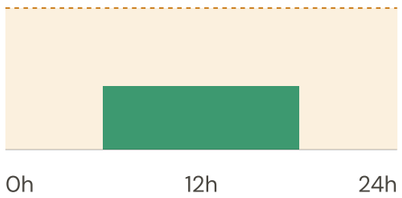


24/7 firm

The same amount of power in every hour of the day.

Variability carried by

The renewable generator, with substantial storage

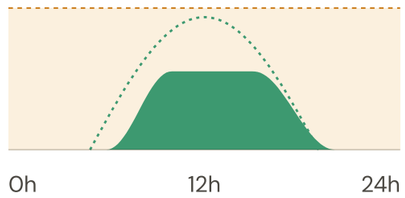


12-hour firm

The same amount of power in every hour of a set 12-hour window, nothing outside it.

Variability carried by

The renewable generator, with some storage



Shaped

Follows renewable output, smoothed by a small battery. The fossil plant covers the rest.

Variability carried by

Mostly the fossil plant

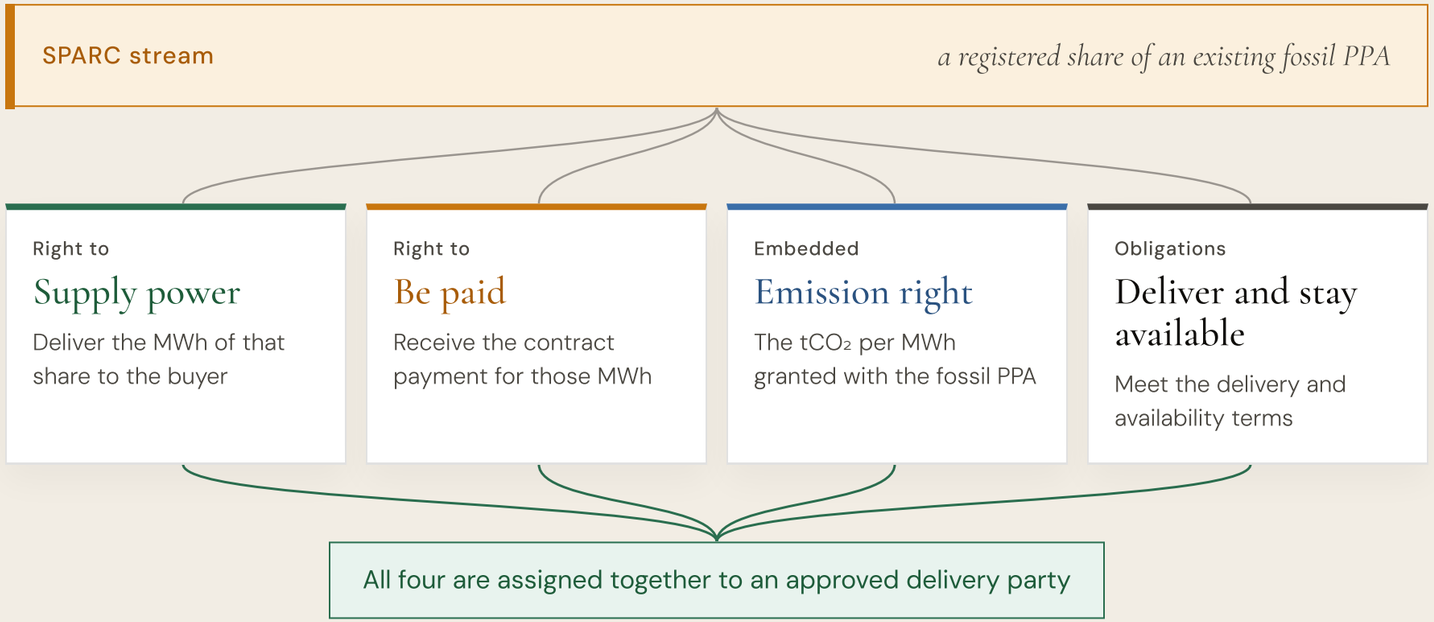
Fossil PPA, over one day SPARC stream Raw solar output

THE SPARC STREAM

A slice of the contract that can change hands

A SPARC stream is a registered share of an existing fossil PPA. It carries four things that used to be locked inside the PPA.

SPARC makes them transferable, together. The underlying PPA stays legally intact.

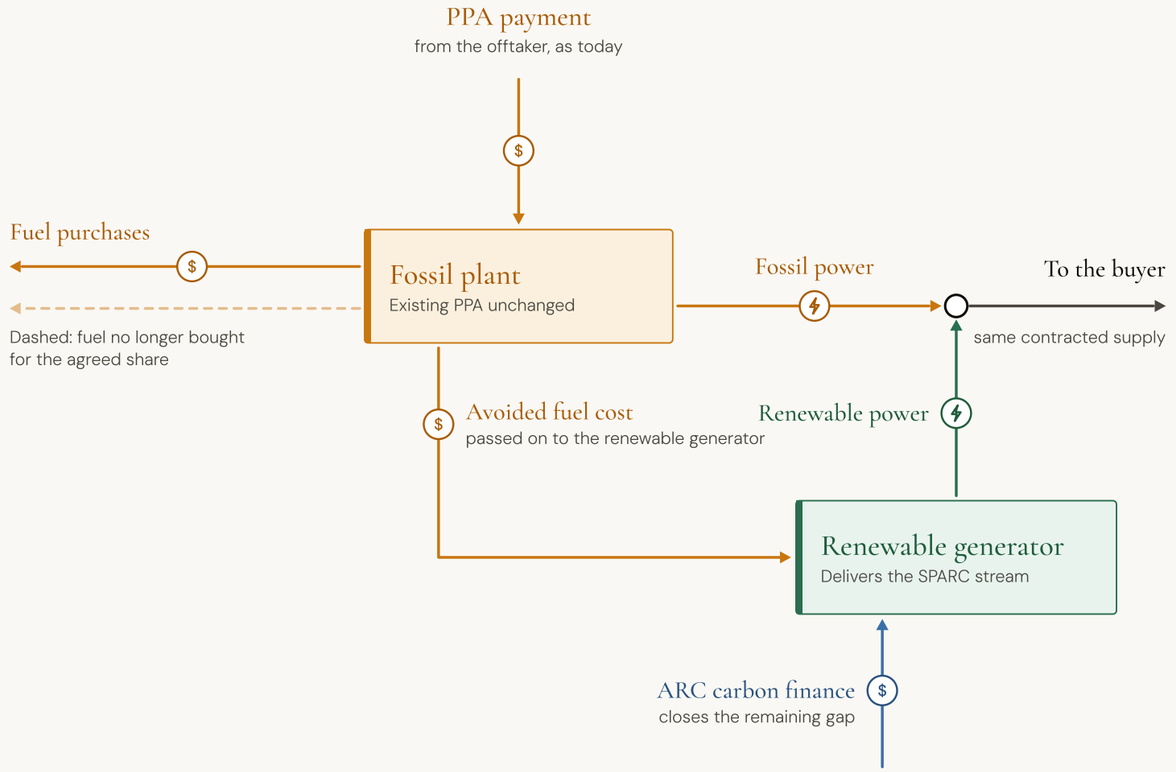


WHO PAYS WHOM

The money follows the existing contract

The offtaker keeps paying the fossil plant under the existing PPA. Nothing changes on that side.

For the agreed share, the plant buys less coal or gas. That avoided cost is passed on to the renewable generator, and ARC carbon finance closes any remaining gap. The buyer receives the same contracted power.

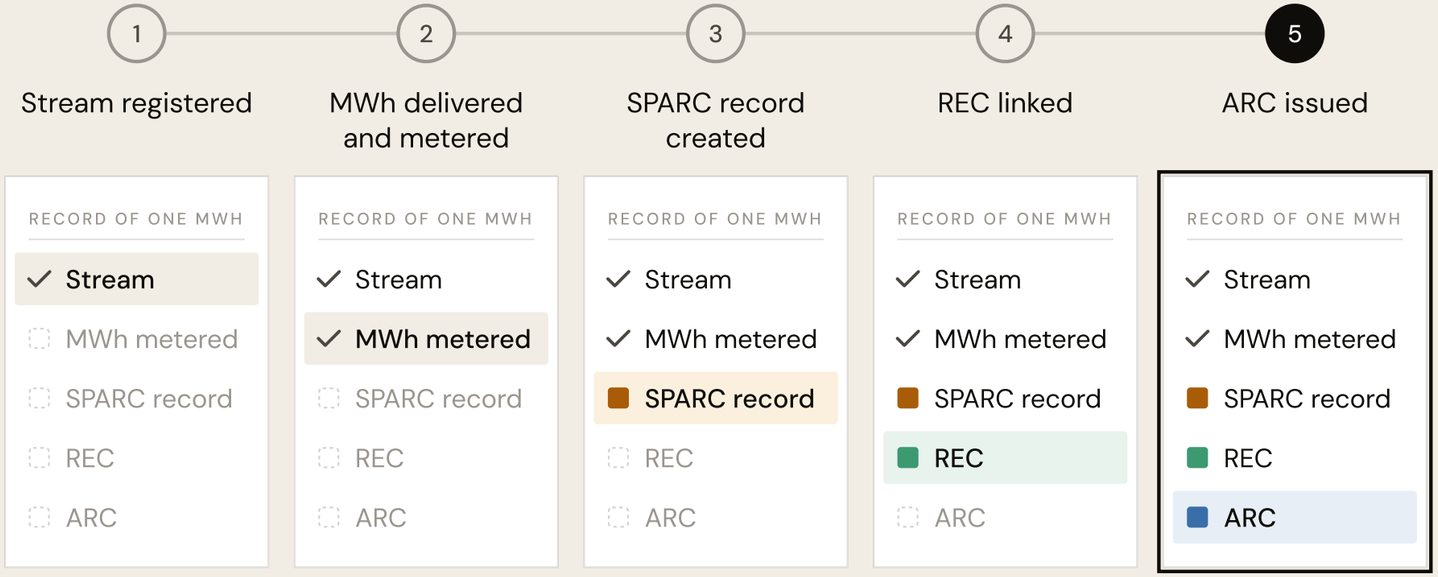


ONE MWH

A SPARC record is created at delivery

When one eligible MWh is delivered under a registered stream and confirmed by the meter, one SPARC record is created. It records the delivery and the right to be paid, and carries the emission right from the coal PPA.

The registry reflects what actually happened, one step at a time.



THREE RECORDS, THREE CLAIMS

One MWh, three records, each proving one thing

When a renewable MWh fulfills a SPARC stream, three records describe it. Each one proves a different point. None of them proves everything on its own.

> A claim of substitution inside a fossil contract needs the SPARC record and evidence that the MWh was lower-emission.

	PROVES	DOES NOT PROVE
SPARC CONTRACTUAL RECORD	This MWh fulfilled a registered SPARC stream inside an existing fossil PPA, with its embedded emission right	That the MWh was renewable. That needs a linked REC or equivalent certificate
REC ENERGY ATTRIBUTE RECORD	This MWh was generated from a qualifying renewable source	The contract it was delivered under, or the emission right attached to it
ARC CARBON RECORD	The emission right held under the stream was not used when a lower-emission MWh fulfilled it	The renewable attribute or the contract substitution. Those need the linked SPARC and REC

THE CARBON RECORD

An ARC is a receipt, not a promise

The plant's emission right is on record before delivery starts. Once delivery is metered and its emissions are verified, the part of that right that was not used is issued as ARCs.

No counterfactual is needed. The reference point is the emission right already recorded with the contract, not an estimate of what might have happened otherwise.

> Buyers can commit finance in advance. The ARC itself exists only after verification.

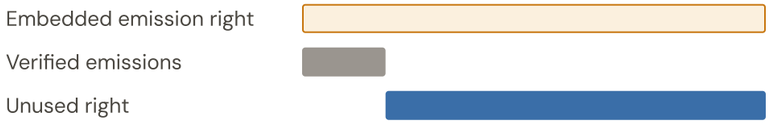
REGISTRY RECORD

Avoided right to emit carbon

01 **Emission right recorded** — BEFORE DELIVERY
The fossil plant's embedded emission right is registered with the stream

02 **Electricity delivered and metered** — AT DELIVERY
One SPARC is created for each MWh delivered

03 **Emissions of that delivery verified** — AFTER DELIVERY
Compared with the right already on record



Unused right issued as ARCs
No forecast or modeled counterfactual enters the record



~30 GW	One	Every
Coal in PPAs in Southeast Asia. None requires a buyout.	PPA can stay intact. Production shifts on the inside.	ARC is a receipt, not a promise.

Green, from the *inside out.*