



Energy is our business



RENEWABLE  
ENERGIES



## About SICAME Group

With over 60 years of expertise in developing products and services related to electricity transmission, distribution, safety equipment, and tools associated with electrical networks, Sicame group is recognized as one of the leader on the market





**50** Companies  
*to deliver safe energy  
to people over the world*

**50,000+** products  
manufactured for 5 strategic  
activity domains

**2,800**  
Employees

Today the group is established  
in 24 countries and its  
products are distributed  
in 170 countries.

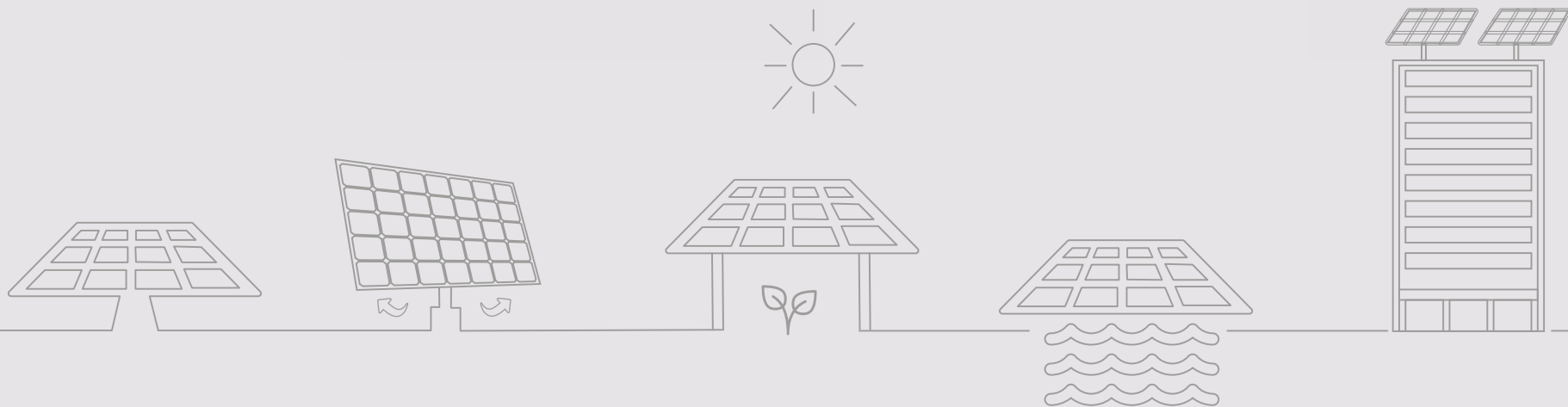




Today SICAME Group is gathering all its know-how and 60 years of experience in one unique and innovative solution for solar farms connection.

With the collaborative work of our R&D teams, **the SICAME Group offers a global solution with unique suspended solar cables' systems from cable suspension, connection accessories, to embedded power.**

**In addition to offering excellent value for money with superior quality, our solution will allow to make significant savings on every construction site design from 1MWp to unlimited GWp.**



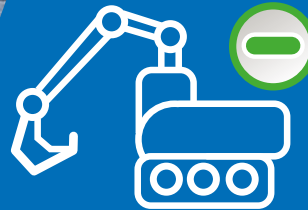
From 1MWp to Unlimited MWp



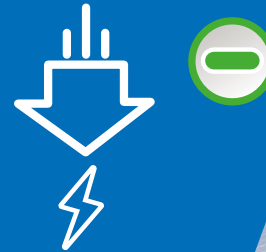
An innovative approach to improve productivity and efficiency



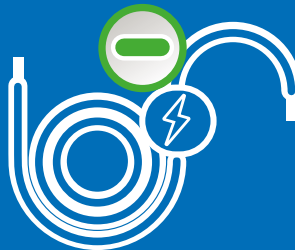
- ✓ No trenching
- ✓ Easy to install
- ✓ Visual control
- ✓ Safe solution
- ✓ Energy savings
- ✓ Higher productivity
- ✓ Cost savings



CIVIL WORKS



LOSSES

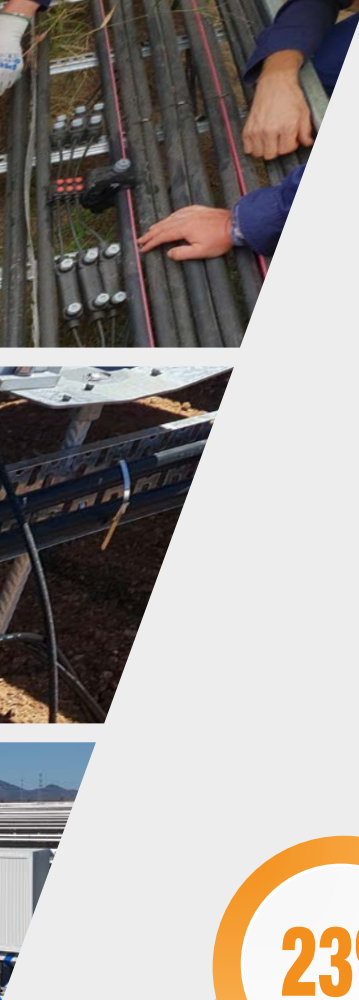


CABLES



PRODUCTIVITY





**23%**

### Time saving

- No civil work
- Aerial is quicker and faster to install  
(no stripping and no combiner box)

**25%**

### Cost saving

- Less cable
- Lower level of operators skills
- No trenches (no sand, no soil to dispose of, less labour)

**50%**

### Losses saving

- Minimize network losses
- Less cable
- Reduced contact resistance

**100%**

### Reliability

- Optimized fuse ventilation
- Proven IPC technology
- Contact resistance

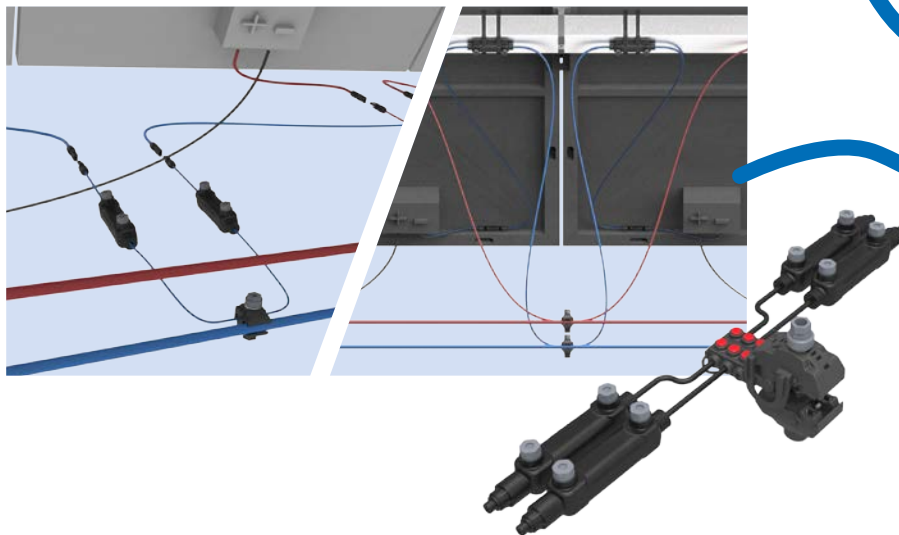
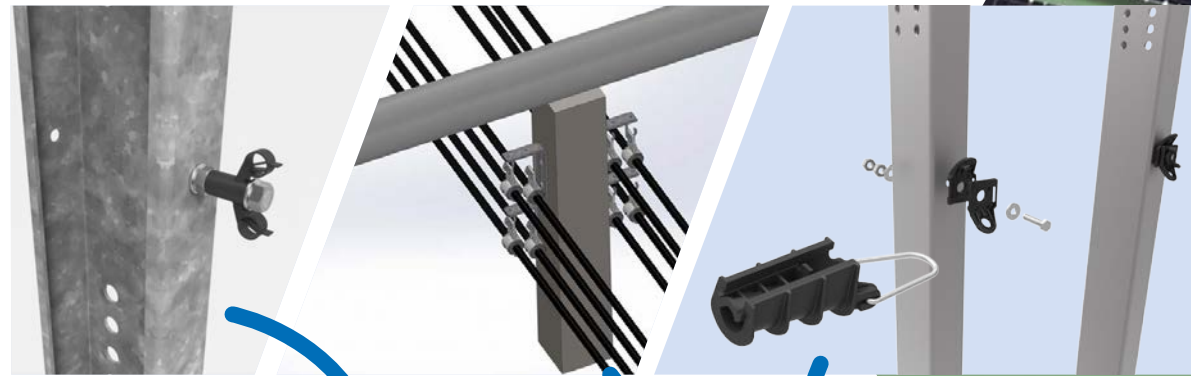
Source: Comparative study of IPC-Harness-6ways VS combiner box 24 strings – design block 5MVA; The PV Boutique; SICAME Group



# Sicame Solar Solution

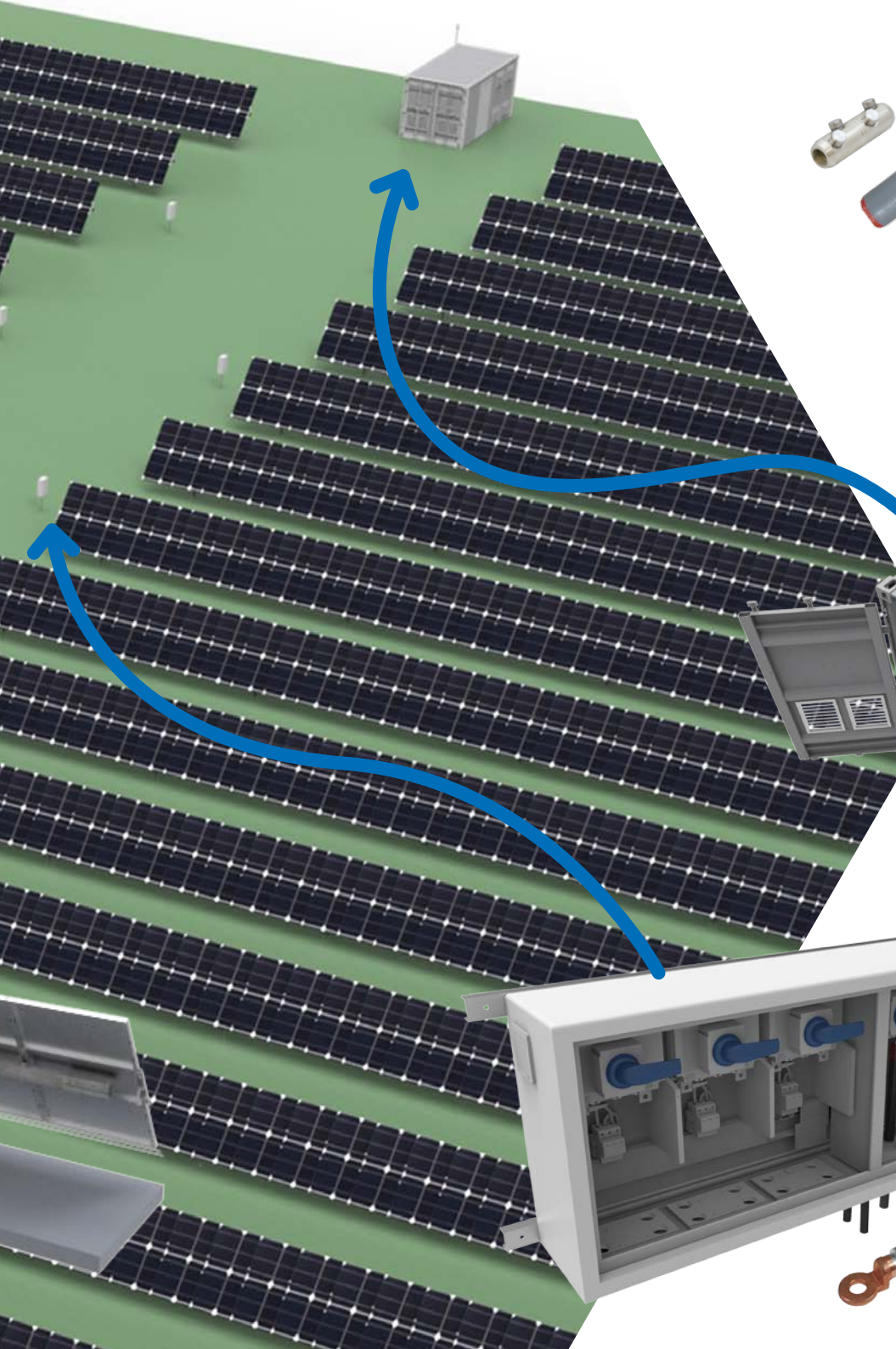
A complete DC reticulation and connection solution for your solar farms

1 DC conductor  
**anchoring  
& suspension**

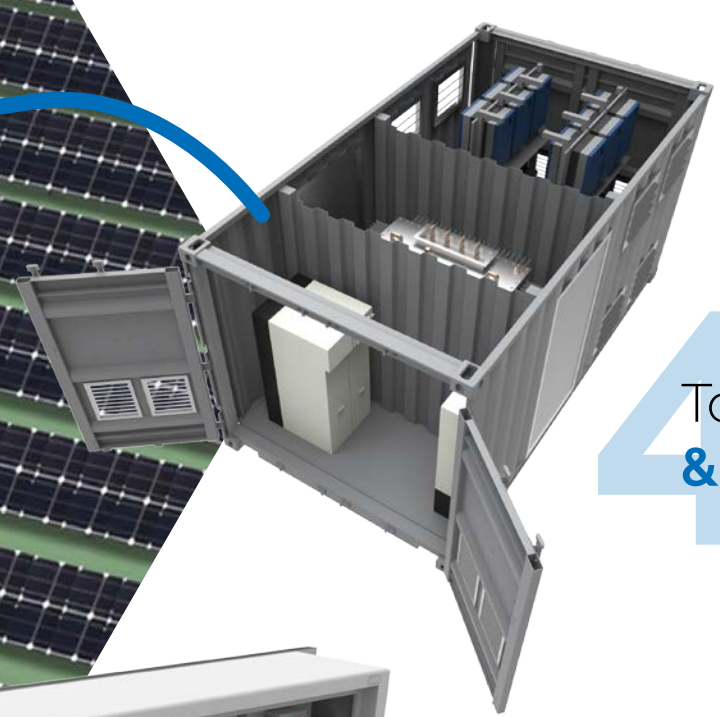


2 Connecting  
the PV panel  
**to the DC Bus**

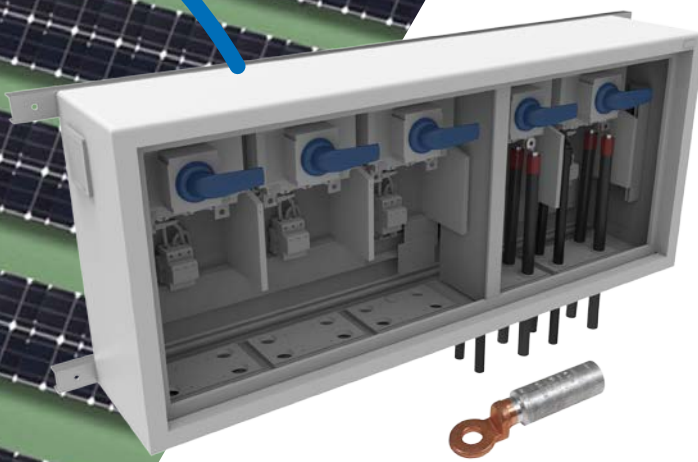




5 From the  
MV kiosk  
to the  
Network



4 To the inverter  
& MV transformer



3 DC bus connection  
to Isolation enclosure

Time  
saving

Cost  
saving

Losses  
saving

UV  
resistant

No  
trenches

No  
stripping  
cable

Water  
tightness



# Sicame Solar Solution

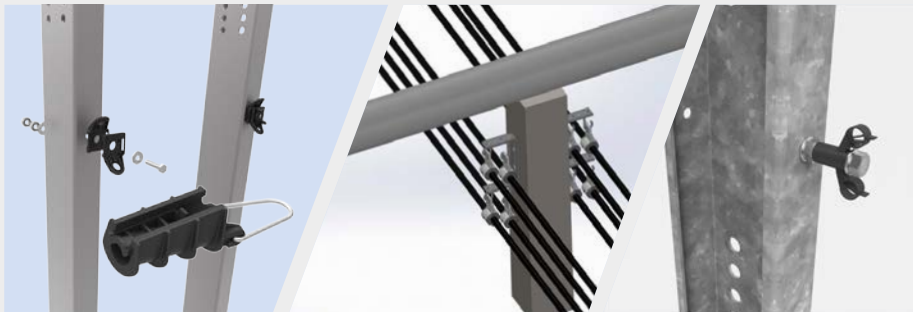
A complete DC reticulation solution for your solar

## 1 Anchoring & suspension accessories



- Sicame best sellers
- Cost saving
- Easy and fast to install
- Minimal tooling
- No trenching
- No specific skills required
- UV stabilized

- Live line work contact
- High mechanical and climatic resistance
- Parallel separation of + and - DC Bus polarity
- Suitable from 4mm<sup>2</sup> to 300mm<sup>2</sup> conductor range
- Modular design system



Anchoring clamps & accessories

DC Strung Bus

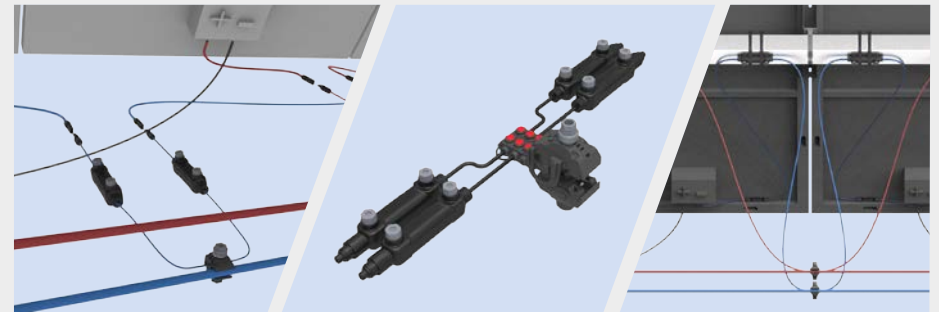
Double bracket device for suspension

## 2 DC IPC Solar Harness



- Sicame IPC technology
- Reliability
- Easy to install
- Minimal tooling
- Less labor time
- Less cabling time
- No more combiner box
- Upon request consultation

- String leads from 4-10mm<sup>2</sup>
- Bus cabling from 50-300mm<sup>2</sup>, double insulated cable
- Suitable with copper and aluminum, stranded or flexible conductor
- Shear head bolt – predetermined torque for reliable & repeatable connection
- 1500 VDC rated system
- Inline fuse ratings from 4-32A
- Dielectric testing to 6.5kV - 300mm underwater





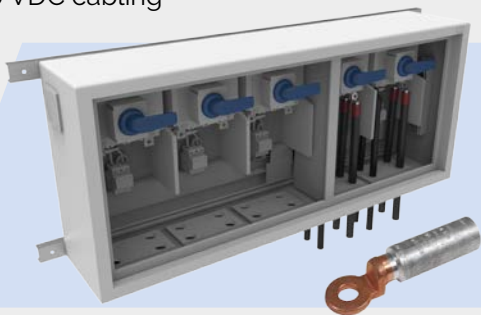
# plants

## 3 DC Isolation Enclosure



- Customizable according to project requirements
- Strong mechanical resistance
- UV and corrosion resistance
- Water thightness

- Strong mechanical shock resistance – IK10
- IP54 or IP66 protection degree
- High resistance to heat, fire and abnormal heat
- High dielectric stenght
- Light weight
- 2 Pole pad lockable load break switches
- 2 Pole surge arresters
- 1500 VDC cabling



## 4 Containerized MV kiosk



- Customizable according to project requirements
- Integrated Cell : Inverter, Transformer & Switchgear
- Aeration and ventilation system
- Excellent thermal characteristics

- 60mm thick insulating panels in a 20' maritime container
- Ventilation: natural, mechanical, fan, air conditioning
- Integration of equipment (inserts for battery chargers, inverter), battery rack, battery
- Separation partition (between batteries, generator set)
- Integrated grounding system



## 5 MV Underground accessories



- Cold shrink technology
- Easiest and quickest assembly
- Extremely Reliable
- Product customization for individualized needs
- Limits misassembling risks

The accessories from 6 to 36kV:

- Terminations (indoor, outdoor)
- Joints (1 core or 3 cores)
- Straight through joints
- Branch joints
- Transitions
- Dead ends
- Elbow connectors



# Sicame solar Solution

A game changer in the electrical design of your PV

## Our complementary offer

Complete range of waterproof mechanical termination lugs.  
With shear head technology to facilitate installation.



**MECHANICAL  
LUGS**

Complete range of equipment to ensure safe installation & maintenance on solar farm sites.



**SAFETY  
EQUIPMENT**



**LIGHTNING  
PROTECTION**



Complete range of accessories to detect & protect your solar farm sites from thunderbolt activity.

**TRANSFORMER  
MONITORING**



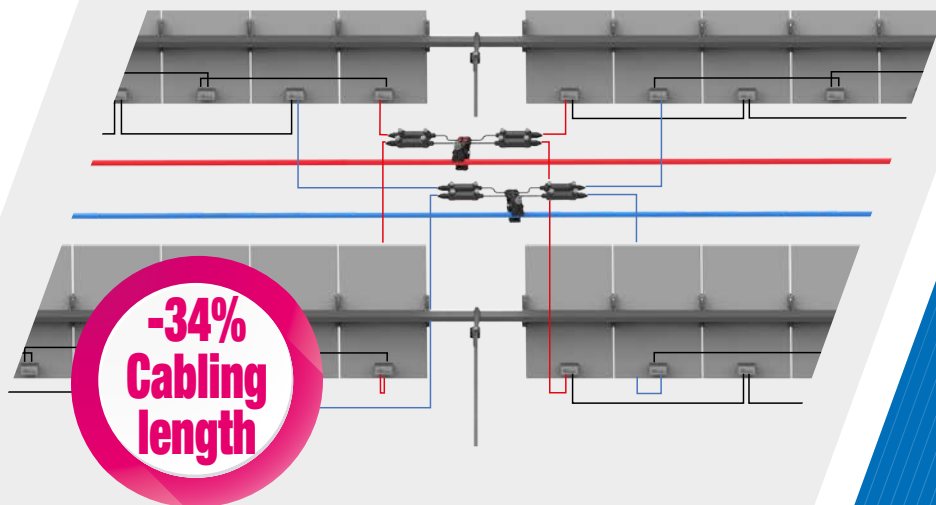
Facilitate maintenance by detection of transformer default.



plants

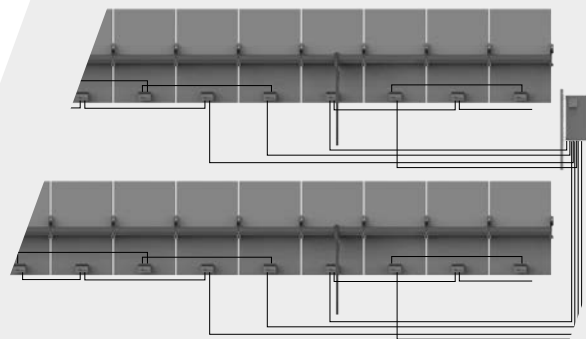
## Cabling savings with Sicame IPC system versus linear cabling

Sicame Harness cabling and IPC module layout



**-34%  
Cabling  
length**

Traditional linear cabling layout



**Cost  
saving**

**Losses  
saving**

**Time  
saving**

## Sicame Solar Support

Sicame provides expert assistance in your electrical changes & improvements and has developed an in-house configurator to help you assess costs-benefits and select your optimized design solution.

### Project parameters

#### Configuration of our IPC solution versus standard models

##### Input data in accordance to the customer specifications

- Design of the PV installation block,
- AC/DC ratio,
- Hour rate

Physical variable magnitudes data characterizing the dimensions of the installation

Choice of currency zone (exchange rate, hourly rate)

#### Your benefits

- Calculation of cable lengths
- Calculation of technical losses
- Comparison of cable tray and trenches lengths
- Evaluation implementation and product costs - from DC routing to inverter



[www.sicamegroup.com](http://www.sicamegroup.com)